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tcgacccacg	cgcccgggaa	catatctcaa	aataataata	actatztatg	acaaacccac	60
agtcaatatc	atactgaatg	ggcaaaagct	ggaagcattc	taaataccaa	aggacatcat	120
tagttaacaa	atgctagact	aactagatac	caaagcttgc	tctgtgaaaa	atccccacat	180
aaccattgaa	gtttacaaca	ccctaaaccc	tgccaccttg	ctcccagtat	cagagagccc	240
agttaaacat	aactatgtag	aggtattaga	ctcagtttat	tctagtaggc	ccaacctcca	300
agaccatcgt	tgaacatcag	tagactggga	gctgtacgtg	gatgggagca	gctttgccaa	360
cccctgcaaa	gtgactcttg	aagaagacca	caaaccctgc	tccagtcaac	atctggaagc	420
ttgactagtc	cacgcatggc	tgaagcatga	ggaaactcat	cacaggactc	attttcctta	480
aaatthagac	ttgtacagta	aagacttcaa	cttgaccttc	ctcagactga	gggctgttcc	540
cagagtatac	atcaagtcac	tgaggtagga	caaaggttg	ctacagtcct	attattttac	600
agttattata	agtgtactgg	aactctaaaa	agaacttggt	tttataatgt	tattctatac	660
aattatztat	aatacaatat	acaaataatg	tatttagccc	aggaaatgac	caacctgatg	720
tgtgttatga	cccatctgag	cctcccatga	ccacagtttt	taaaataaga	ttaagaactg	780
aagactgggtg	ggggctcata	aacaatatga	gtaaagtgtt	agccaaaata	aaacaaaaaa	840
aaaagggcgg	cc					852

FIG. 1A

tcgacccacg	cgcccgggca	tggccaggcc	ggctgggctg	cagagcgccg	gcacgggtcc	60
acgcctcggg	tgacgggctt	ccaggatgtt	cgggcgcggg	gcggcccatc	cgcaccccc	120
aacaccccca	cctccggcct	gagcctccca	gcgcggggg	aaccacctcc	tgtccgctgt	180
tgtcggcccg	catcctagca	gcggcctgac	gccctcccca	ccctggcatg	cccccttgac	240
ctgggacgat	gagcatacga	ctggggagcc	cagtggaggc	gccctcccga	agcgccactg	300
cccatgctga	ccaccagcc	ctccggctgc	tgatgtcatg	agtaacacca	ctgtgcccaa	360
tgccccccag	gccaacagcg	actccatggt	gggctatgtg	ttggggccct	tcttcctcat	420
caccctgggtc	gggggtggtg	tggctgtggt	aatgtatgta	cagaagaaaa	agcgggtgga	480
ccggctgcgc	catcacctgc	tccccatgta	cagctatgac	ccagctgagg	aactgcatga	540
ggctgagcag	gagctgctct	ctgacatggg	agaccccaag	gtggtacatg	gctggcagag	600
tggctaccag	cacaagcgga	tgccactgct	ggatgtcaag	acgtgacctg	accccttgct	660
cccacccttc	agagcctggg	gtcctggact	gcctggggcc	ctgccatctg	cttcccctgc	720
tgtcacctgg	ctccccctgc	tgggtgctgg	gtctccattt	ctccctccac	ccaccctcag	780
cagcatctgc	ttcccatgcc	ctcaccatca	cctcactgcc	cccaggcctt	ctgccctttg	840
tgggtgttga	gctcaccgcc	caccacaggg	cactcatagg	aagaggcttt	ccttctggga	900
tggcggcggc	tggtagacac	ctttgctttc	tctagccctc	ctgggctggg	cttgggcccc	960
aatccccagg	caggctttgg	agttgtttcc	atgggtgatg	ggccagatgt	atagtattca	1020
gtatatatzt	tgtaaataaa	atgttttgtg	gctaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	1080
aaaaaaaaagg	gcggcc					1096

FIG. 1B

FIG. 1A

**FIG. 1 C**

FIG. 1 D

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tcgacccacg	cgtccgcaaa	acctaaatag	aagtgtgtgt	taccgtgtgc	caatgtgtcc	60
catgtgggtt	gtgccaggta	gagaaacagg	aagtcaatca	tctgtgacag	tctctattct	120
gtcgttttgc	tccttggtat	ttgatttgca	ctatatattag	ttgaagcctg	ttcactgttt	180
aaaaccggag	gtatcttcaa	aggcatggag	acctggttcc	agtaaagtgc	ccaccagtgg	240
ggtatagaaa	gcatgctcat	gaccctgccg	tgctgtctga	ggtaccggtt	cttatcctag	300
tggttcagga	agagaaaacg	cagtttgcac	tttcaagaca	gcttctctaa	ggctggcatg	360
ttatctcctt	gctttgcttt	ttgccgtttt	aaaatgtgta	attgttccag	cattccaatg	420
gtcttgtgca	tagcagggga	ctgtaaccaa	aaataaacat	gtatttgtgt	aattggtttg	480
aagaagtctt	gaatagctct	ttactgtcct	acttgggggt	gataagattt	gagtgtttgc	540
aattttttac	taaatgtagc	tccaaagtct	taaatggctt	gtttgttctt	aaactgttaa	600
ttgatgaaac	tgtgcataag	tttacaatgt	actaacttat	tttgcttatt	atatatagtg	660
ttttattgga	aattgtaacc	acacacttca	gcatgatgaa	aataaagatt	agtgtttcca	720
tttaaataaa	tgttttatcc	tcccataaaa	aaaaaaaaaa	aaagggcggc	c	771

FIG. 1E

tcgacccacg	cgtccgcagg	cagtgactgc	cctcggtttt	ttttctgctg	actaagatct	60
cctatagaga	gctacaacaa	tgcccaaaag	aaagccaaag	agaagatctg	ccagggttgc	120
tgctatgctt	gtgccagtta	caccagaggt	gaagcctaaa	agaacatcaa	gttcaaggaa	180
aatgaagaca	aaaagtgata	tgatggaaga	aaacatagat	acaagtgcc	aagcagttgc	240
tgaaccaag	caagaagcag	ttgttggaaga	agactacaat	gaaaatgcta	aaaatggaga	300
agccaaaatt	acagaggcac	cagcttctga	aaaagaaatt	gtggaagtaa	aagaagaaaa	360
tattgaagat	gccacagaaa	agggaggaga	aaagaaagaa	gcagtggcag	cagaagtaaa	420
aatgaagaa	gaagatcaga	aagaagatga	agaagatcaa	aacgaagaga	aaggggaagc	480
tggaagaa	gacaaagatg	aaaaagggga	agaagatgga	aaagaggata	aaaatggaaa	540
tgagaaagga	gaagatgcaa	aagagaaaga	agatggaaaa	aaaggtgaag	acggaaaagg	600
aatggagaa	gatggaaaag	agaaaggaga	agatgaaaaa	gaggaagaag	acagaaaaga	660
aacaggagtt	ggaaaagaga	atgaggatgg	aaaagagaag	ggagataaaa	aagaggggaa	720
agatgtaaaa	gtcaaagaag	atgaaaaaga	gagagaagat	ggaaaagaag	atgaaggtgg	780
aatgaggaa	gaagctggaa	aagagaaaga	agatttaaaa	gaagaggaag	aaggaaaaga	840
ggaagatgag	atcaaagaag	atgatggaaa	aaaagaggag	ccacagagta	ttgtttaaaa	900
ctgccctatg	tagtttcata	atgttgtaac	atgtaccttc	atgttgtaaa	gttaatagag	960
ataaatattt	ttatcaaaaa	ttttataaac	acagcctttc	tttagcattg	atthaatttc	1020
agaacatctt	catattgatt	attagccata	aagtttctaa	catgaaacat	ttatctataa	1080
atthtgtgat	tatagtagtg	gaatacatag	aaaaaaatat	gctttcaact	ttgtgagtga	1140
atthcgtgtt	gtgtaagtta	tatgtcaaat	ctttgaattt	taattttact	ccttttatac	1200
atgtgataat	ttcataaagt	gagggatccc	aaaaaaagag	tttcatccca	acattccttg	1260
tctgcagggt	gcttttataa	agaaggtgaa	ctatthttcat	gtaatgttaa	gagttaaact	1320
tatctttccc	aaatataact	ttattattag	cttgggaaaa	atgaaattgt	attcccatth	1380
ttaaaataaa	tacaaatgtt	tatttcagaa	gggcagtttt	gattatatgt	gaatacacaa	1440
atthttactg	atthtatctta	ataaaaagac	tctgacgatg	atthgtgttt	gttatatctt	1500
caaaaatata	gctagtgaag	tattgtgctt	aattthtttc	tattgtgtta	ttcatgaaaa	1560
tatttaatat	tactgacat	aaaattaata	taaagtaaaa	ttcaccatth	taattataat	1620
aaaaataaag	tatataattc	aaaaaaaaaa	aaaaaaaaaa	agggcgcc		1669

FIG. 1F

Sequence 1030601

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tcgacccacg	cgtccgtgat	aaataactta	taggtgatag	tgataattcc	tgattccaag	60
aatgccatct	gataaaaaag	aatagaaatg	gaaagtggga	ctgagaggga	gtcagcaggc	120
atgctgcggt	ggcggtcact	ccctctgcca	ctatccccag	ggaaggaaag	gctccgcat	180
ttgggaaagt	ggtttctacg	tcactggaca	ccggttctga	gcattagttt	gagaactcgt	240
tccgaatgt	gctttcctcc	ctctcccctg	cccacctcaa	gtttaataaa	taagggttga	300
cttttcttac	tataaaataa	atgtctgtaa	ctgctgtgca	ctgctgtaaa	cttgtagag	360
aaaaaaataa	cctgcatgtg	ggctcctcag	ttattgagtt	tttgtgatcc	tatctcagtc	420
tgggggggaa	cattctcaag	aggtgaaata	caagaaagcc	tttttttctt	ggatcttttc	480
ccgagattca	aatctccgat	ttcccatttg	ggggcaagtt	tttttcttca	ccttcaatat	540
gagaattcag	cgaacttgaa	agaaaaatca	tctgtgagtt	ccttcagggt	ctcactcata	600
gtcatgatcc	ttcagaggga	atatgcactg	gcgagtttaa	agtaagggt	atgatatttg	660
atggtcccaa	agtacggcag	ctgcaaaaag	tagtggaagg	aaattgtcta	cgtgtcttgg	720
aaaaattagt	taggaatttg	gatgggtaaa	aggtaccctt	gccttactcc	atcttatttt	780
cttagccccc	tttgagtgtt	ttaactgggt	tcatgtccta	gtaggaagtg	cattctccat	840
cctcatcctc	tgccctccca	ggaagtcagt	gattgtcttt	ttgggcttcc	cctccaaagg	900
accttctgca	gtggaagtgc	cacatccagt	tcttttcttt	tgttgctgct	gtgtttagat	960
aattgaagag	atctttgtgc	cacacaggat	tttttttttt	ttttaagaaa	aacctataga	1020
tgaaaaatta	ctaataaaac	tgtgtgtacg	tgtctgtgcg	tgcaacataa	aaatacagta	1080
gcacctaagg	agcttgaatc	ttggttcctg	taaaatttca	aattgatgtg	gtattaataa	1140
aaaaaaaaaa	aacccaaaaa	aaaaaaaaaa	aaaagggcgg	cc		1182

FIG. 1G

066661-0804  
"TOP" PAGE

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tcgacccacg	cgtccggagg	agagagagtg	aacagggagc	ggggcttttg	cctgttggtc	60
tccctggact	gaagagaggg	agaatagaag	cccaagacta	agattctcaa	aatggtttat	120
taccagaac	tctttgtctg	ggtcagtcaa	gaaccatttc	caaacaagga	catggagggg	180
aggcttccta	agggaagact	tcctgtccca	aaggaagtga	accgcaagaa	gaacgatgag	240
acaaacgctg	cctccctgac	tccactgggc	agcagtgaac	tccgctcccc	aagaatcagt	300
tacctccact	ttttttaatc	gtaacacctc	catttgtatt	acatatgggtg	tatgggtatt	360
gatgaggtca	tggtatcata	tatgggattt	ttttctgtgt	aatcatcaa	gtataagaag	420
aaactatggg	actctgagcc	ttgctttaga	gaatttacag	tggacaaata	ggtgtcatca	480
aaccagtttt	taatcattct	gactcaagtg	aaaacgctca	gaatttcaca	ctgtgaatcc	540
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actcaaactc	ccaccgcgct	cacacaaccg	gtccactcct	gccttttcac	tcacacagct	660
cccgaactgt	tcttgagag	gctgagagtc	ccccccac	cttttttttc	atttagatgt	720
aacaaaccta	gtagtttatg	ttcatcaatt	gtctgtatat	ctctatattt	tatccatgta	780
ctcttttgat	gtatagaagt	agtttgaaac	tcattgtttc	cttgtggtaa	gtgaccgaga	840
tgctgccaca	ggacctgaga	cactgatgaa	tggtgctatt	ttggactttc	aacatgctcc	900
ttggcgaggt	agctctgatg	gagttatttt	ttatttccat	gttctaagaa	ggtgttggtg	960
ctctgtttcc	cttgaatggt	gttctctaga	ctggattgac	ttgttttcct	tgtgtcttca	1020
gtgtggcttt	cttcctcagt	gttgtaggtt	gagcgaatgc	taccagagtg	tgagagacca	1080
ttgtctcggt	ggctggcgct	cacggacatg	cagtcacggt	agcgggagca	atcacaaaac	1140
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aaaagcaata	atttttacagg	cattttgagg	tgtctctttg	ggttctttct	gtttgaaagg	1260
atatttgctg	aaaaaaagag	caaaaccggt	ttaaataaac	tccccctgga	aaaaaaccca	1320
aaacactggc	atactgagtg	ggaatatgaa	aatgacacct	tttccaaata	ttaaattgga	1380
aaacaaggtc	tacaaaatca	tgatactttt	ttaaaaggca	gagcattctt	ttttcggcaa	1440
ttttgataag	caaggtgtag	atttacattt	ttgtccttgc	tccaacgaa	atggataaac	1500
aaaaataaat	taccatctac	tcatggaatg	ttgttgtgtt	agccagtctg	aaagcccacc	1560
ttaattttta	tataactgtc	tttagctctt	cttttgacag	ggcaggcctt	gttctgaact	1620
gtttcgcttc	tgactgttaa	acaccgatga	cgcattgcact	gcacttcttc	gttttcttct	1680
tgctcccca	ttggcctgag	tttcttgtgc	attacgcctc	tccctccttc	gttagaatag	1740
gtgtatcagc	tgtgtaaata	gagcaagaaa	acagtattct	gcattctgtg	catttatgta	1800
gagttgcagt	tgtgtactgc	tgaaaatgca	ggcttttgta	acagtgtgat	ctttactgat	1860
gcactcatga	caagtaccca	atgtatttta	gctatttttag	tagtattttgt	tcaataaata	1920
cgcaagctgt	aaggtaaaaa	aaaaaaaaaa	aaaaaaagg	cggcc		1965

FIG. 1H

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tcgacccacg	cgtccgggaa	cgtacgtccc	agccctcttt	agctacttag	cgcctctggg	60
cccgagaaca	cctgctcctt	ggctcagtct	ggcgccaccg	gcatcacgga	actgtacttc	120
ccagagacgt	cacaccggga	gacttccgat	tcccgtcctt	gagattggac	tctcacgtgc	180
aggagccagt	cctcgctggg	ctctagcggg	cttctgatgg	aggagctact	cctctgggag	240
gacagaaatt	agcagcagcc	tctgtcacca	tccaaagatt	acaacccatg	aaaccattga	300
gtttgtgcct	tgtatcagaa	agcaaaggag	aatgaaaaag	cacagctaac	attgcttgag	360
gatctaggcg	attaattctt	tagactgtca	tcatgggtat	cccgaggact	aatgagtttt	420
gtgggaagat	cataagtaat	gaagttcttc	actgatttga	agttgcgggg	acacaaaaat	480
tgtcattgat	ggttatgctc	ttttccaccg	tctttgcttc	agtttcaaac	ttggatctcc	540
ggatggagg	ggactatgat	tcttttgcag	atgttgatga	aaaattcttt	gaatcactgt	600
ttgcttgtaa	tatatgcccc	tatgttgtat	tagatggagg	atgtgacatt	tcagataaaa	660
agcttacaac	tttaaaggat	agagctagag	aggagatcca	gatggcccat	tccctttctg	720
ttgggtgggag	tgggtatgta	tgtcccctac	tcatccggga	agtattcata	cagggtttga	780
tcaagctgcg	gggtgtgttt	gtccagtgtc	tttcagaagc	agatcgggac	attatgacac	840
ttgctaacca	ttggaattgc	cctgtgttat	catcagatag	tgacttttgc	atttttgacc	900
tgaaaactgg	gttttgcccc	ttgaatagct	ttcagtggag	aaatatgaac	actattaagg	960
gcacacaaaa	ctatatccct	gccaaatgct	tttcccttga	tgcattctgc	catcacttca	1020
gcaatatgaa	taaagctcta	ctacctctct	ttgcggtgct	atgtggaaat	gaccatgtta	1080
atctacccat	catggagaca	ttcttaagta	aagcgcgtct	tcctcttgga	gctaccagtt	1140
ctaaagggag	gagacaccac	cgaatcctgg	gacttctgaa	ttggttgtct	cattttgccca	1200
accctaccga	agcactagat	aatgttctga	aatacctccc	aaaaaaggat	cgagaaaatg	1260
ttaaggaact	tctctgctgt	tccatggaag	aataccaaca	gtcccagggtg	aagctacagg	1320
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gggtattagt	ggcttttagct	aaaggccagc	tatctccttt	catcagtgat	gcttttggtcc	1440
taagacggac	cattcttccc	acacaggtgg	aaaacatgca	gcaaccaaat	gcccacagaa	1500
tatctcagcc	catcaggcaa	atcatctatg	ggcttctttt	aatgcctca	ccacatctgg	1560
acaagacatc	ctggaatgca	ttgcctcctc	agcctctagc	tttcagtga	gtggaaagga	1620
ttaataaaaa	tatcagaacc	tcaatcattg	atgcagtaga	actggccaag	gatcattctg	1680
acttaagcag	attgactgag	ctctccttga	ggaggcggca	gatgcttctg	ttagaaaccc	1740
tgaaggtgaa	acagaccatt	ctggagccaa	tccctacttc	actgaagttg	cccattgctg	1800
tcagttgcta	ctggttgcag	cacaccgaga	caaagcaaaa	gctacatcat	ctacaatcct	1860
tactgctcac	aatgctagtg	gggcccttga	ttgccataat	caacagccct	ggaaatgtgg	1920
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taactcgact	gtacagtgga	agcctggtgc	acggactatg	ccagcaactg	ctagcatcga	2220
cctctgtaga	aagtgtcctg	agcatatgtc	ctgaggctaa	gcaactttat	gaatatctat	2280
tcaatgcccc	caaggtcata	tgcccccgct	gaaatattcc	tacaaaagg	tagatcaaat	2340
tcaaaaaaaaa	aaaggcagaa	gaaacagaat	accagctggt	ctaagaacag	agggagaacc	2400
actgcacaca	ccaagtgttg	gtatgagggg	aacaaccggt	ttgggttggt	aatgggtgaa	2460
aacttagagg	aacatagtga	ggcctccaac	attgaataaa	actcagtttg	catcaaacta	2520
gatgtattta	atataatcct	tacttaaaaat	tcttccgtta	ccacccttga	aacaattagc	2580
tttttcttta	ggactgacct	gttaggggat	aaacatcaca	ataatctgaa	ttccaagtta	2640
ttttgtattt	tgtttttaat	aaatacaacc	tgattttaaga	aaaaaaaaaa	aaaagggcgg	2700
cc						2702

FIG.11

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tcgacccacg	cgccgcctg	ccagcggacg	acgtggtcag	catcatcgag	gaggtggagg	60
agaagcggaa	gcggaagaag	aacgcccctc	ccgagcccgt	gccgcccccc	cgtgccgccc	120
ccgccccac	ccacgtccgc	tccccgcagc	ccccgcccc	cgcccccgct	cccgcacgag	180
acgagctgcc	ggactggaac	gaggtgctcc	cgccctggga	tcgggaggag	gacgaggtgt	240
acccgccagg	gccgtaccac	cctttcccca	actacatccg	gccgcggaca	ctgcagccgc	300
cctcggcctt	gcgcgcgcgc	cactaccacc	acgccttgcc	gccttcgcgc	cactatcccg	360
gccgggaggc	ccaggcgcgc	cgcgcgacgc	aggaggcgga	ggcggaggag	cgccgggtgc	420
aggagcagga	ggagctggag	aattacatcg	agcacgtgct	gctccggcgc	ccgtgactgc	480
ccttcccgtg	accgcccccg	cgcgcccccg	ccgcgcgcgc	gcgcggcggc	ccccctccgt	540
gttggccgct	ccccctcggt	gtttgcatgc	gccccggccc	tgccccttgg	ccctgcccct	600
gtccccgggc	tgcgtcggga	cctgccagac	ccccctcccg	ggcctgagc	ccgaactccc	660
agagctcacc	cgcggggtgac	cggggggccag	cccaggaggg	cgggtggttt	gtgcgagttc	720
ccttgccacg	cgggggccccg	gccccatcaa	gtccctctgg	ggacgtcccc	gtcggaaacc	780
ggaaaaagca	gttccagtta	attgtgtgaa	gtgtgtctgt	ctccagccct	tcgggcctcc	840
cacgagcccc	tccagcctct	caaagtcgct	gtgaattgac	cccttctttc	ctttctctgt	900
tgtaaatacc	cctcacggag	gaaatagttt	tgctaagaaa	taaaagtgac	tattttaaaa	960
aaaaaaaaaa	agggcggcc					979

FIG. 1J

FIG. 1J

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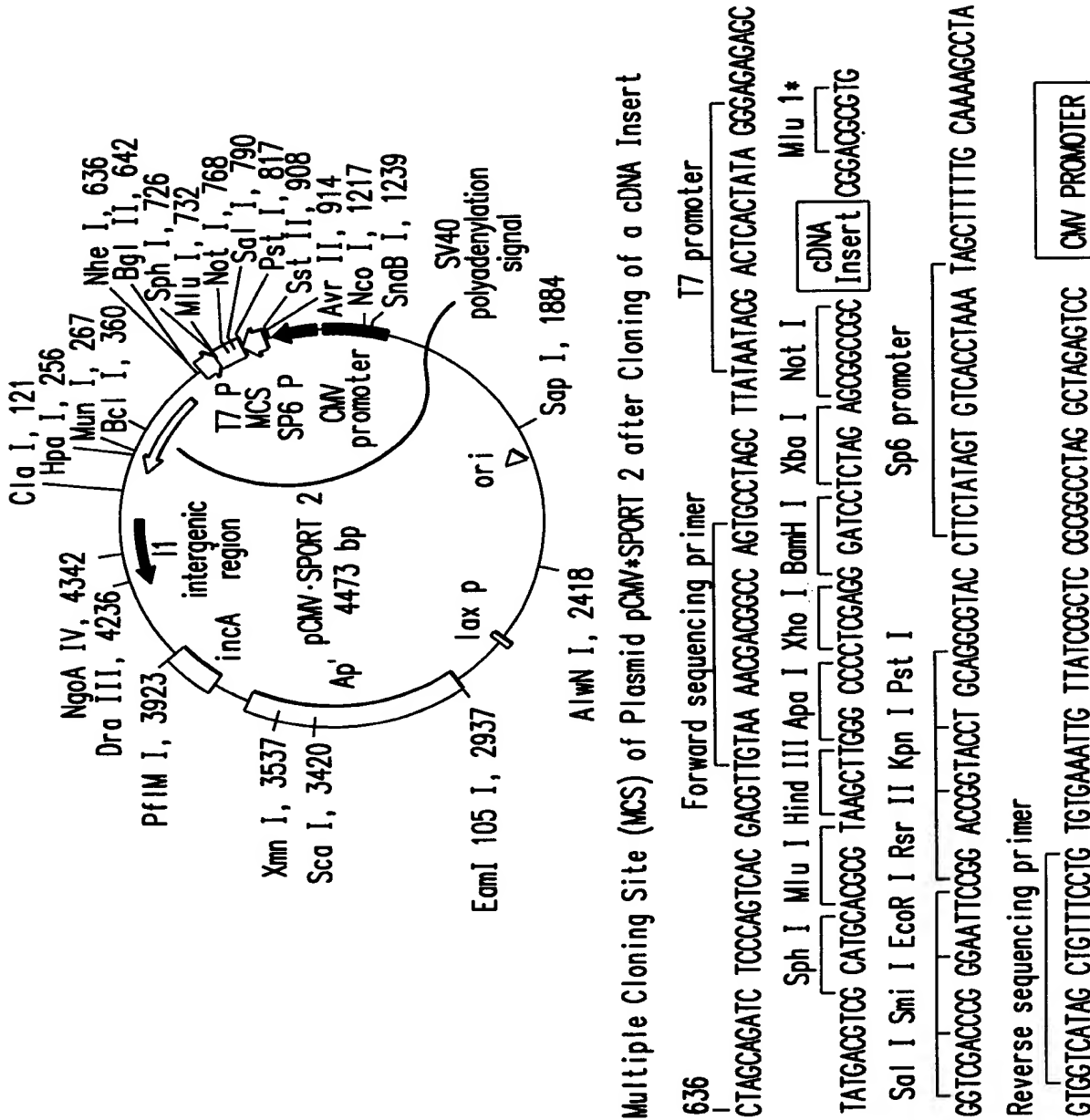
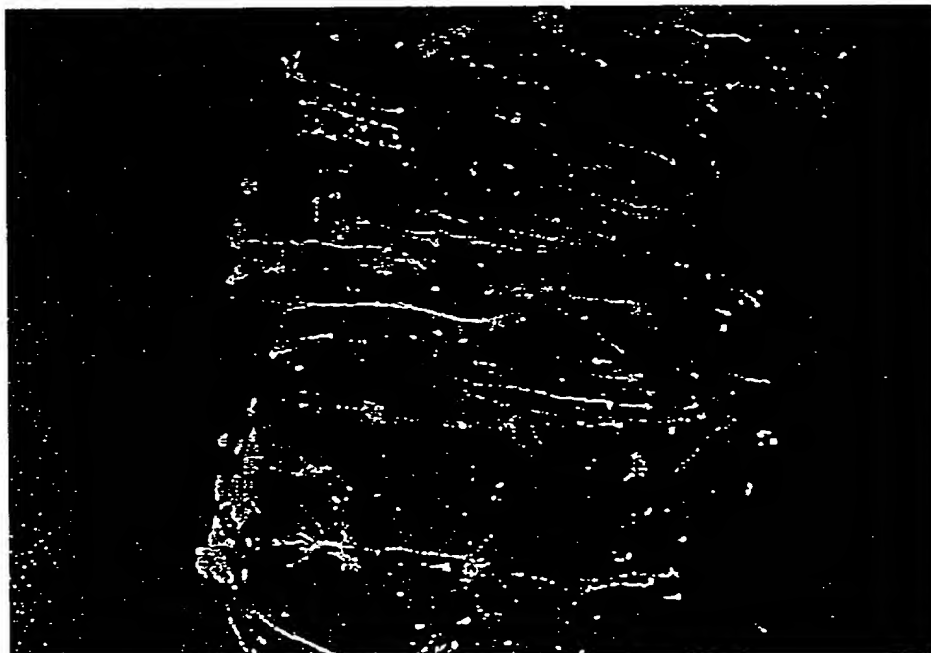


FIG.2

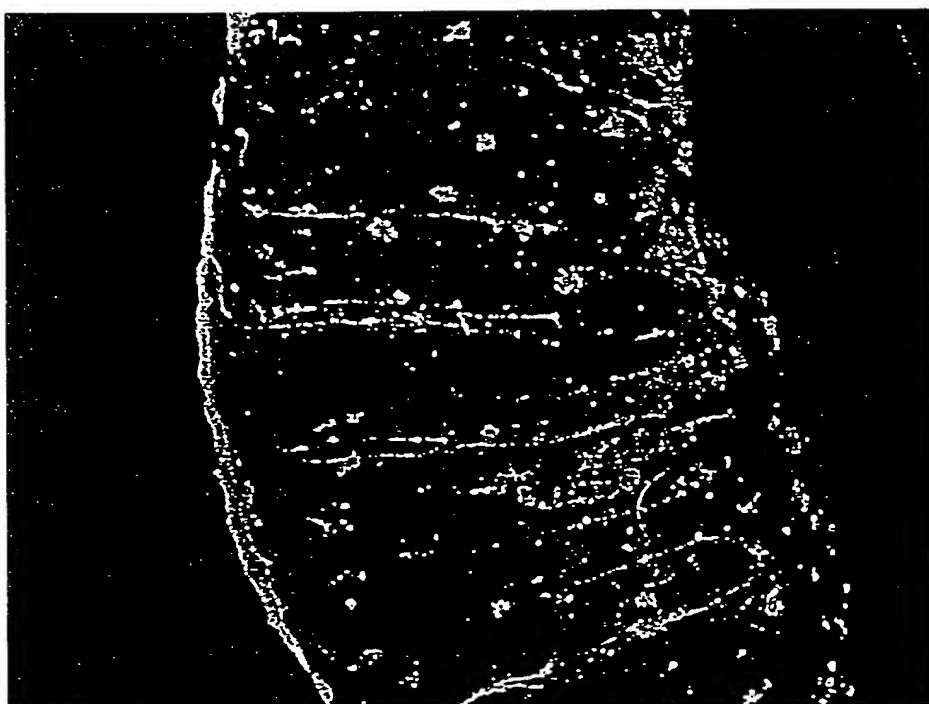
\*This Mlu I restriction site contained within the Sal I adapter is introduced into the pCMV-SPORT 2 vector upon ligation of the cDNA insert. Due to flanking sites, Mlu I, by itself, or the combined Not I-Sal I digestion can be used to completely excise the cDNA insert.



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**FIG.3A**



**FIG. 3B**

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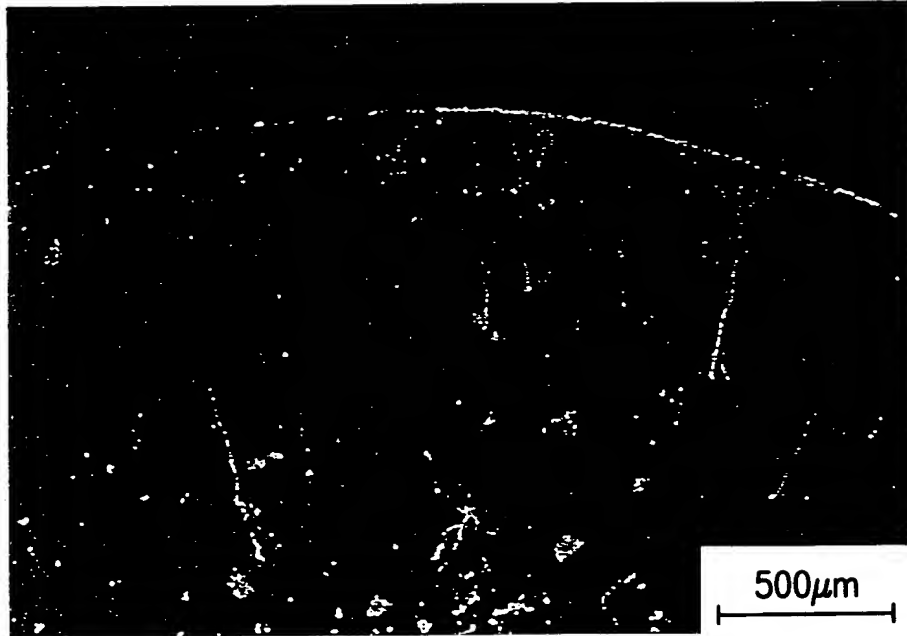


FIG.3C

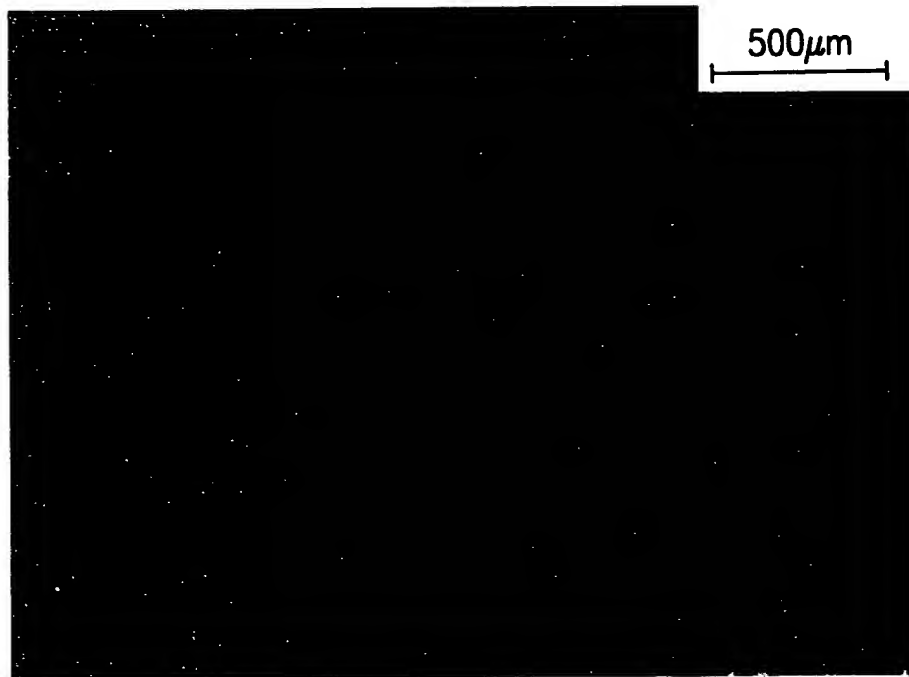


FIG.3D

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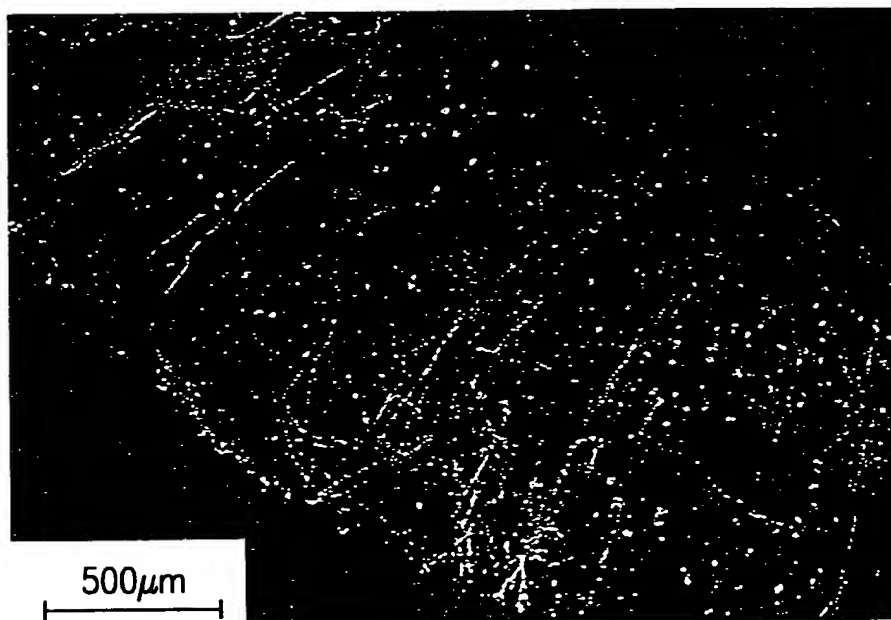


FIG. 3E

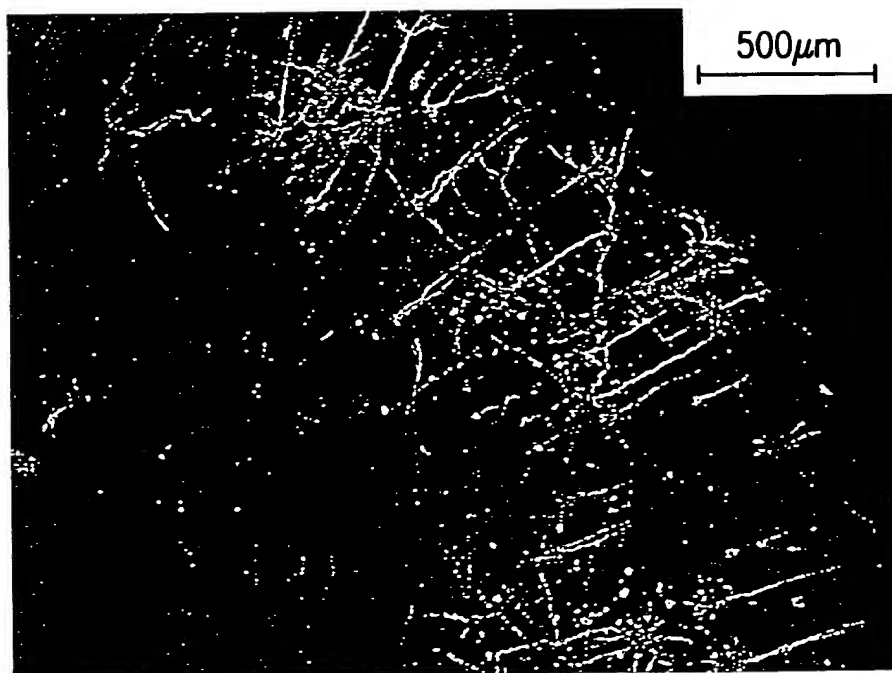


FIG. 3F

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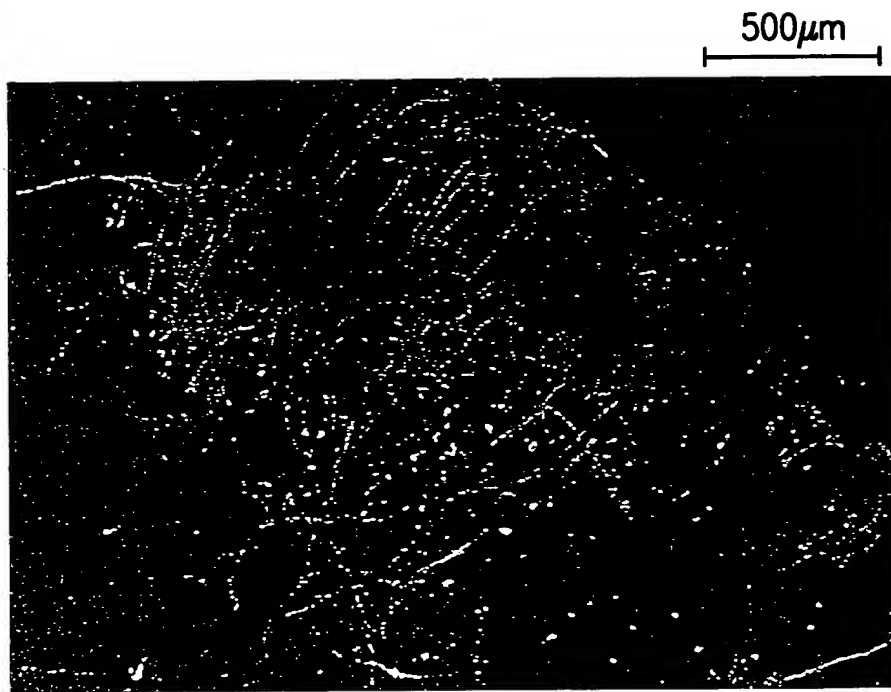


FIG.3G

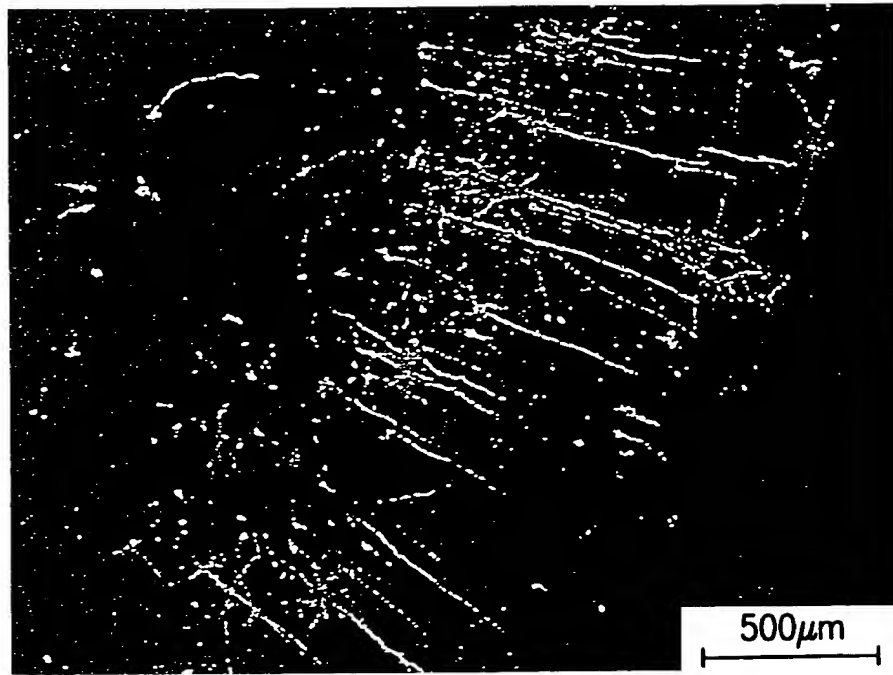


FIG.3H

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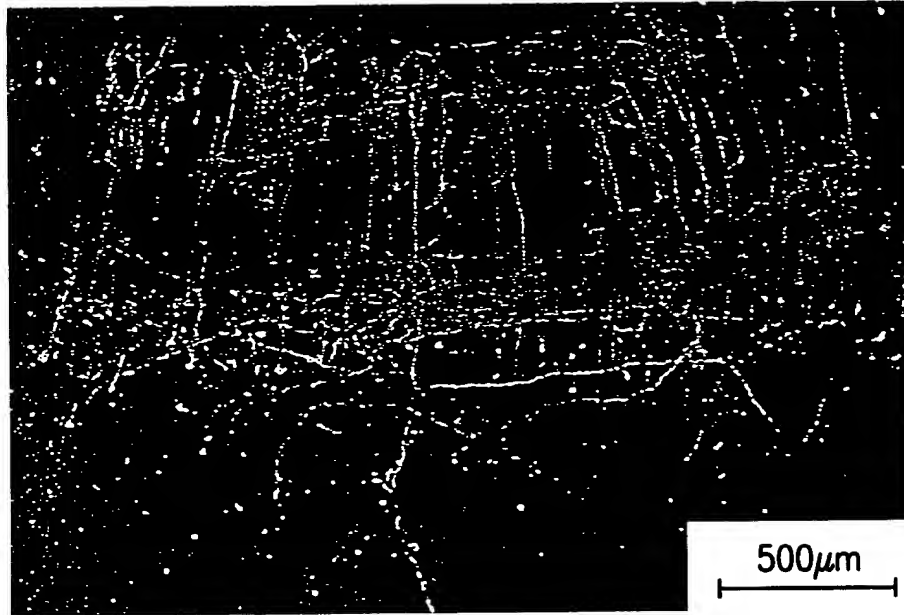


FIG.3I

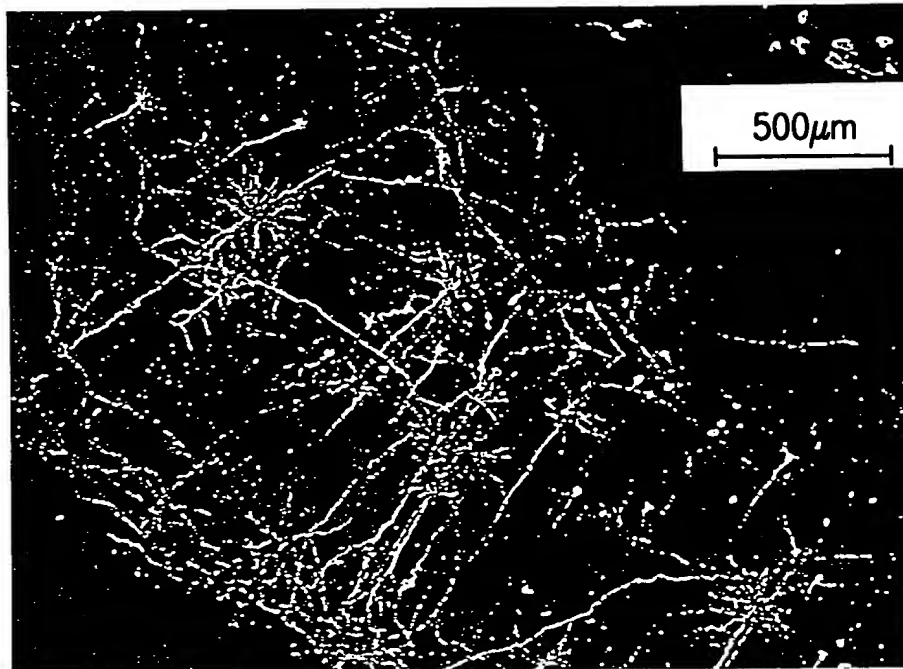


FIG.3J

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"FIG. 3I" 0592261-080301

Figure 1 displays a series of 12 musical staves, each representing a different time signature and key signature. The staves are arranged vertically, and each staff contains musical notation, including notes, rests, and bar lines. The time signatures and key signatures are as follows:

- Staff 1: 4/4, C major
- Staff 2: 4/4, C major
- Staff 3: 4/4, C major
- Staff 4: 4/4, C major
- Staff 5: 4/4, C major
- Staff 6: 4/4, C major
- Staff 7: 4/4, C major
- Staff 8: 4/4, C major
- Staff 9: 4/4, C major
- Staff 10: 4/4, C major
- Staff 11: 4/4, C major
- Staff 12: 4/4, C major

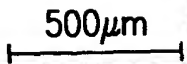
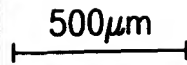


FIG. 3L





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atgacaaacc cacagtcaat atcataactga

30

Met Thr Asn Pro Gln Ser Ile Ser Tyr

1

5

## FIG.4A

atgggcaaaa gctggaagca ttctaaatac caaaggacat cattagttaa caaatgctag

60

Met Gly Lys Ser Trp Lys His Ser Lys Tyr Gln Arg Thr Ser Leu Val

1

5

10

15

Asn Lys Cys

## FIG.4B

atgctagact aa

12

Met Leu Asp

1

## FIG.4C

atgggagcag ctttgccaac ccctgcaaag tga

33

Met Gly Ala Ala Leu Pro Thr Pro Ala Lys

1

5

10

## FIG.4D

atggctgaag catga

15

Met Ala Glu Ala

1

## FIG.4E

atgaggaaac tcatcacagg actcattttc cttaaaattt ag

42

Met Arg Lys Leu Ile Thr Gly Leu Ile Phe Leu Lys Ile

1

5

10

## FIG.4F

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## FIG. 4G

## FIG. 4H

## FIG. 41

## FIG. 4J

## FIG. 4K

## FIG. 4L

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atggccaggc cggctgggct gcagagcgcc ggcacgggtc cacgcctcgg gtga 54

Met Ala Arg Pro Ala Gly Leu Gln Ser Ala Gly Thr Gly Pro Arg Leu  
1 5 10 15  
Gly

## FIG.5A

atgttcgggc gcggggcggc ccatccgcat cccccaacac cccacctcc ggcctga 57

Met Phe Gly Arg Gly Ala Ala His Pro His Pro Pro Thr Pro Pro Pro  
1 5 10 15  
Pro Ala

## FIG.5B

atgccccctt ga 12

Met Pro Pro  
1

## FIG.5C

atgagcatatc gactggggag cccagtggag gcgccctccc gaagcgccac tgcccatgct 60  
gaccacccag ccctccggct gctgatgtca tga 93

Met Ser Ile Arg Leu Gly Ser Pro Val Glu Ala Pro Ser Arg Ser Ala  
1 5 10 15  
Thr Ala His Ala Asp His Pro Ala Leu Arg Leu Leu Met Ser  
20 25 30

## FIG.5D

atgctgacca cccagccctc cggctgctga 30

Met Leu Thr Thr Gln Pro Ser Gly Cys  
1 5

## FIG.5E

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atgagtaaca ccactgtgcc caatgcccc caggccaaca gcgactccat ggtgggctat 60  
gtgttggggc ctttcttct catcaccctg gtcgggggtg tggtggctgt ggtaatgtat 120  
gtacagaaga aaaagcgggt ggaccggctg cgccatcacc tgctcccat gtacagctat 180  
gaccagctg aggaactgca tgaggctgag caggagctgc tctctgacat gggagacccc 240  
aaggtggtac atggctggca gagtggctac cagcacaagc ggatgccact gctggatgtc 300  
aagacgtga 309

Met Ser Asn Thr Thr Val Pro Asn Ala Pro Gln Ala Asn Ser Asp Ser  
1 5 10 15  
Met Val Gly Tyr Val Leu Gly Pro Phe Phe Leu Ile Thr Leu Val Gly  
20 25 30  
Val Val Val Ala Val Val Met Tyr Val Gln Lys Lys Lys Arg Val Asp  
35 40 45  
Arg Leu Arg His His Leu Leu Pro Met Tyr Ser Tyr Asp Pro Ala Glu  
50 55 60  
Glu Leu His Glu Ala Glu Gln Glu Leu Leu Ser Asp Met Gly Asp Pro  
65 70 75 80  
Lys Val Val His Gly Trp Gln Ser Gly Tyr Gln His Lys Arg Met Pro  
85 90 95  
Leu Leu Asp Val Lys Thr  
100

FIG.5F

atgccccca ggccaacagc gactccatgg tgggctatgt gttggggccc ttcttctca 60  
tcaccctggt cggggtggtg gtggctgtgg taa 93

Met Pro Pro Arg Pro Thr Ala Thr Pro Trp Trp Ala Met Cys Trp Gly  
1 5 10 15  
Pro Ser Ser Ser Ser Pro Trp Ser Gly Trp Trp Trp Leu Trp  
20 25 30

FIG.5G

FIG. 5J

Figure 1 consists of 12 histograms arranged in a single row. Each histogram represents the distribution of the number of non-zero elements in the vector  $x$  for a specific value of  $n$ . The x-axis for all histograms is labeled 'x' and ranges from 0 to 120. The y-axis is labeled 'count' and ranges from 0 to 100. The histograms are labeled with their corresponding  $n$  values: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, and 120. As  $n$  increases, the distribution becomes more concentrated around zero, with the peak count increasing and the spread decreasing.

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atgtacagaa	gaaaaagcgg	gtggaccggc	tgcgccatca	cctgctcccc	atgtacagct	60
atgaccagc	tgaggaactg	catgaggctg	agcaggagct	gctctctgac	atgggagacc	120
ccaaggtggt	acatggctgg	cagagtggct	accagcacia	gcggatgcca	ctgctggatg	180
tcaagacgtg	acctgacccc	cttgccccac	ccttcagagc	ctggggctct	ggactgcctg	240
gggccctgcc	atctgcttcc	cctgctgtca	cctggctccc	cctgctgggt	gctgggtctc	300
catttctccc	tccaccacc	ctcagcagca	tctgcttccc	atgccctcac	catcacctca	360
ctgccccag	gccttctgcc	ctttgtgggt	gttgagctca	ccgcccaccc	acaggcactc	420
ataggaagag	gctttccttc	tgggatggcg	gcggctggta	gacacctttg	ctttctctag	480

Met	Tyr	Arg	Arg	Lys	Ser	Gly	Trp	Thr	Gly	Cys	Ala	Ile	Thr	Cys	Ser
1				5					10					15	
Pro	Cys	Thr	Ala	Met	Thr	Gln	Leu	Arg	Asn	Cys	Met	Arg	Leu	Ser	Arg
			20					25					30		
Ser	Cys	Ser	Leu	Thr	Trp	Glu	Thr	Pro	Arg	Trp	Tyr	Met	Ala	Gly	Arg
		35				40					45				
Val	Ala	Thr	Ser	Thr	Ser	Gly	Cys	His	Cys	Trp	Met	Ser	Arg	Arg	Asp
	50					55					60				
Leu	Thr	Pro	Leu	Pro	His	Pro	Ser	Glu	Pro	Gly	Val	Leu	Asp	Cys	Leu
65					70					75					80
Gly	Pro	Cys	His	Leu	Pro	Leu	Leu	Ser	Pro	Gly	Ser	Pro	Cys	Trp	
				85				90					95		
Val	Leu	Gly	Leu	His	Phe	Ser	Leu	His	Pro	Pro	Ser	Ala	Ala	Ser	Ala
			100					105					110		
Ser	His	Ala	Leu	Thr	Ile	Thr	Ser	Leu	Pro	Pro	Gly	Leu	Leu	Pro	Phe
		115					120					125			
Val	Gly	Val	Glu	Leu	Thr	Ala	His	Pro	Gln	Ala	Leu	Ile	Gly	Arg	Gly
	130					135					140				
Phe	Pro	Ser	Gly	Met	Ala	Ala	Ala	Gly	Arg	His	Leu	Cys	Phe	Leu	
145					150					155					

FIG.5K

atgtacagct	atgaccagc	tgaggaactg	catgaggctg	agcaggagct	gctctctgac	60
atgggagacc	ccaaggtggt	acatggctgg	cagagtggct	accagcacia	gcggatgcca	120
ctgctggatg	tcaagacgtg	a				141

Met	Tyr	Ser	Tyr	Asp	Pro	Ala	Glu	Glu	Leu	His	Glu	Ala	Glu	Gln	Glu
1				5					10					15	
Leu	Leu	Ser	Asp	Met	Gly	Asp	Pro	Lys	Val	Val	His	Gly	Trp	Gln	Ser
			20					25					30		
Gly	Tyr	Gln	His	Lys	Arg	Met	Pro	Leu	Leu	Asp	Val	Lys	Thr		
		35					40					45			

FIG.5L

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atgacccagc	tgaggaactg	catgaggctg	agcaggagct	gctctctgac	atgggagacc	60
ccaaggtggt	acatggctgg	cagagtggct	accagcacia	gcggatgcc	ctgctggatg	120
tcaagacgtg	acctgacccc	cttgccccac	ccttcagagc	ctggggctct	ggactgcctg	180
gggccctgcc	atctgcttcc	cctgctgtca	cctggctccc	cctgctgggt	gctgggtctc	240
catttctccc	tccacccacc	ctcagcagca	tctgcttccc	atgccctcac	catcacctca	300
ctgccccag	gccttctgcc	ctttgtgggt	gttgagctca	ccgcccaccc	acaggcactc	360
ataggaagag	gctttccttc	tgggatggcg	gcggctggta	gacacctttg	ctttctctag	420

Met	Thr	Gln	Leu	Arg	Asn	Cys	Met	Arg	Leu	Ser	Arg	Ser	Cys	Ser	Leu
1				5					10					15	
Thr	Trp	Glu	Thr	Pro	Arg	Trp	Tyr	Met	Ala	Gly	Arg	Val	Ala	Thr	Ser
			20					25					30		
Thr	Ser	Gly	Cys	His	Cys	Trp	Met	Ser	Arg	Arg	Asp	Leu	Thr	Pro	Leu
		35					40					45			
Pro	His	Pro	Ser	Glu	Pro	Gly	Val	Leu	Asp	Cys	Leu	Gly	Pro	Cys	His
	50					55					60				
Leu	Leu	Pro	Leu	Leu	Ser	Pro	Gly	Ser	Pro	Cys	Trp	Val	Leu	Gly	Leu
65					70					75				80	
His	Phe	Ser	Leu	His	Pro	Pro	Ser	Ala	Ala	Ser	Ala	Ser	His	Ala	Leu
				85					90					95	
Thr	Ile	Thr	Ser	Leu	Pro	Pro	Gly	Leu	Leu	Pro	Phe	Val	Gly	Val	Glu
			100					105					110		
Leu	Thr	Ala	His	Pro	Gln	Ala	Leu	Ile	Gly	Arg	Gly	Phe	Pro	Ser	Gly
	115						120					125			
Met	Ala	Ala	Ala	Gly	Arg	His	Leu	Cys	Phe	Leu					
	130						135								

FIG.5M

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atgaggctga	gcaggagctg	ctctctgaca	tgggagaccc	caaggtggta	catggctggc	60
agagtggcta	ccagcacaag	cggatgccac	tgctggatgt	caagacgtga	cctgaccccc	120
ttgccccacc	cttcagagcc	tggggtcctg	gactgcctgg	ggccctgcca	tctgcttccc	180
ctgctgtcac	ctggctcccc	ctgctgggtg	ctgggtctcc	atttctccct	ccaccacccc	240
tcagcagcat	ctgcttccca	tgccctcacc	atcacctcac	tgcccccagg	ccttctgccc	300
tttgtgggtg	ttgagctcac	cgcccaccca	caggcactca	taggaagagg	ctttccttct	360
gggatggcgg	cggctggtag	acacctttgc	tttctctag			399

Met	Arg	Leu	Ser	Arg	Ser	Cys	Ser	Leu	Thr	Trp	Glu	Thr	Pro	Arg	Trp
1				5					10					15	
Tyr	Met	Ala	Gly	Arg	Val	Ala	Thr	Ser	Thr	Ser	Gly	Cys	His	Cys	Trp
			20					25					30		
Met	Ser	Arg	Arg	Asp	Leu	Thr	Pro	Leu	Pro	His	Pro	Ser	Glu	Pro	Gly
		35					40					45			
Val	Leu	Asp	Cys	Leu	Gly	Pro	Cys	His	Leu	Leu	Pro	Leu	Leu	Ser	Pro
	50					55					60				
Gly	Ser	Pro	Cys	Trp	Val	Leu	Gly	Leu	His	Phe	Ser	Leu	His	Pro	Pro
65				70					75					80	
Ser	Ala	Ala	Ser	Ala	Ser	His	Ala	Leu	Thr	Ile	Thr	Ser	Leu	Pro	Pro
			85					90					95		
Gly	Leu	Leu	Pro	Phe	Val	Gly	Val	Glu	Leu	Thr	Ala	His	Pro	Gln	Ala
			100					105					110		
Leu	Ile	Gly	Arg	Gly	Phe	Pro	Ser	Gly	Met	Ala	Ala	Ala	Gly	Arg	His
		115					120						125		
Leu	Cys	Phe	Leu												
			130												

FIG.5N

atgggagacc	ccaaggtggt	acatggctgg	cagagtggct	accagcacia	gcggatgcc	60
ctgctggatg	tcaagacgtg	a				81

Met	Gly	Asp	Pro	Lys	Val	Val	His	Gly	Trp	Gln	Ser	Gly	Tyr	Gln	His
1				5				10					15		
Lys	Arg	Met	Pro	Leu	Leu	Asp	Val	Lys	Thr						
			20					25							

FIG 5O

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atggctggca	gagtggctac	cagcacaagc	ggatgccact	gctggatgtc	aagacgtgac	60
ctgacccct	tgccccacc	ttcagagcct	ggggtcctgg	actgcctggg	gccctgccat	120
ctgcttcccc	tgctgtcacc	tggtcccccc	tgctgggtgc	tggtgtctcca	tttctccctc	180
caccaccct	cagcagcatc	tgcttcccat	gccctcacca	tcacctcact	gccccaggc	240
cttctgccct	ttgtgggtgt	tgagctcacc	gccacccac	aggcactcat	aggaagaggc	300
tttcttctg	ggatggcggc	ggctggtaga	cacctttgct	ttctctag		348

Met	Ala	Gly	Arg	Val	Ala	Thr	Ser	Thr	Ser	Gly	Cys	His	Cys	Trp	Met
1				5					10					15	
Ser	Arg	Arg	Asp	Leu	Thr	Pro	Leu	Pro	His	Pro	Ser	Glu	Pro	Gly	Val
			20					25					30		
Leu	Asp	Cys	Leu	Gly	Pro	Cys	His	Leu	Leu	Pro	Leu	Leu	Ser	Pro	Gly
		35					40					45			
Ser	Pro	Cys	Trp	Val	Leu	Gly	Leu	His	Phe	Ser	Leu	His	Pro	Pro	Ser
	50					55					60				
Ala	Ala	Ser	Ala	Ser	His	Ala	Leu	Thr	Ile	Thr	Ser	Leu	Pro	Pro	Gly
65					70					75					80
Leu	Leu	Pro	Phe	Val	Gly	Val	Glu	Leu	Thr	Ala	His	Pro	Gln	Ala	Leu
				85					90					95	
Ile	Gly	Arg	Gly	Phe	Pro	Ser	Gly	Met	Ala	Ala	Ala	Gly	Arg	His	Leu
			100					105					110		
Cys	Phe	Leu													
		115													

FIG.5P

atgccactgc tggatgtcaa gacgtga  
27

Met Pro Leu Leu Asp Val Lys Thr  
1 5

FIG.5Q



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atgtcaagac	gtgacctgac	ccccttgccc	cacccttcag	agcctggggt	cctggactgc	60
ctggggccct	gccatctgct	tcccctgctg	tcacctggct	ccccctgctg	ggtgctgggt	120
ctccatttct	ccctccaccc	accctcagca	gcatctgctt	cccatgccct	caccatcacc	180
tcactgcccc	caggccttct	gccctttgtg	ggtgttgagc	tcaccgcca	cccacaggca	240
ctcataggaa	gaggctttcc	ttctgggatg	gcggcggtg	gtagacacct	ttgctttctc	300
tag						303

Met	Ser	Arg	Arg	Asp	Leu	Thr	Pro	Leu	Pro	His	Pro	Ser	Glu	Pro	Gly
1				5					10					15	
Val	Leu	Asp	Cys	Leu	Gly	Pro	Cys	His	Leu	Leu	Pro	Leu	Leu	Ser	Pro
		20					25					30			
Gly	Ser	Pro	Cys	Trp	Val	Leu	Gly	Leu	His	Phe	Ser	Leu	His	Pro	Pro
		35					40					45			
Ser	Ala	Ala	Ser	Ala	Ser	His	Ala	Leu	Thr	Ile	Thr	Ser	Leu	Pro	Pro
	50					55					60				
Gly	Leu	Leu	Pro	Phe	Val	Gly	Val	Glu	Leu	Thr	Ala	His	Pro	Gln	Ala
65					70					75				80	
Leu	Ile	Gly	Arg	Gly	Phe	Pro	Ser	Gly	Met	Ala	Ala	Ala	Gly	Arg	His
			85					90						95	
Leu	Cys	Phe	Leu												
															100

## FIG.5R

atgccctcac	catcacctca	ctgccccag	gccttctgcc	ctttgtgggt	gttgagctca	60
ccgcccaccc	acaggcactc	atag				84

Met	Pro	Ser	Pro	Ser	Pro	His	Cys	Pro	Gln	Ala	Phe	Cys	Pro	Leu	Trp
1				5					10					15	
Val	Leu	Ser	Ser	Pro	Pro	Thr	His	Arg	His	Ser					
			20					25							

## FIG.5S

atggcggcgg	ctggtagaca	cctttgcttt	ctctag	36
------------	------------	------------	--------	----

Met	Ala	Ala	Ala	Gly	Arg	His	Leu	Cys	Phe	Leu
1				5					10	

## FIG.5T

atggtgatgg	ggccagatgt	atag	24
------------	------------	------	----

Met	Val	Met	Gly	Pro	Asp	Val
1				5		

## FIG.5U

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atggggccag atgtatag

18

Met Gly Pro Asp Val

1

5

FIG.5V

atgtatagta ttcagtatat attttgtaaa taa

33

Met Tyr Ser Ile Gln Tyr Ile Phe Cys Lys

1

5

10

FIG.5W

atgttttgtg gctaa

15

Met Phe Cys Gly

1

FIG.5X

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atgttgagat	actggggaga	gataccaata	tcatacaagcc	agaccaacag	aagttccttc	60
gatttgctcc	cacgggagtt	ccgtctggtg	gaagtccatg	accacccct	gcaccaaccc	120
tcagccaaca	agccgaagcc	ccccactatg	ctggacatcc	cctcagagcc	atgtagtctc	180
accatccata	cgattcagtt	gattcagcac	aaccgacgtc	ttcgcaacct	tattgccaca	240
gctcaggccc	agaatcagca	gcagacagaa	ggtgtaaaaa	ctgaagagag	tgaacctctt	300
ccctcgtgcc	ctgggtcacc	tcctctccct	gatgacctcc	tgcctttaga	ttgtaagaat	360
cccaatgcac	cattccagat	ccggcacagt	gaccagaga	gtgactttta	tcgtgggaaa	420
ggggaacctg	tgactgaact	cagctggcac	tcctgtcggc	agctcctcta	ccaggcagtg	480
gccacaatcc	tggcccacgc	gggctttgac	tgtgctaata	agagtgtcct	ggagacccta	540
actgatgtgg	cacatgagta	ttgccttaag	ttaccaagt	tgctgcgttt	tgctgtggac	600
cgggaggccc	ggctgggaca	gactcctttt	cctgatgtga	tggagcaggt	attccatgaa	660
gtgggtattg	gcagtgtgct	ctccctccag	aagttctggc	agcaccgcat	caaggactat	720
cacagttaca	tgctacagat	tagtaagcaa	ctctctgaag	aatatgaaag	gattgtcaat	780
cctgagaagg	ccacagagga	cgctaaacct	gtgaagatca	aggaggaacc	tgtgagcgac	840
atcacttttc	ctgtcagtga	ggagctggag	gctgaccttg	cttctggaga	ccagtcactg	900
cctatgggag	tgcttggggc	tcagagcgaa	cgcttcccat	ctaacctgga	ggttgaagct	960
tcaccacagg	cttcaagtgc	agaggtaaat	gcttctcctc	tttggaatct	ggcccatgtg	1020
aaaatggagc	ctcaagaaag	tgaagaaggc	aatgtctctg	ggcatggtgt	gctgggcagt	1080
gatgtcttcg	aggagcctat	gtcaggcatg	agtgaagctg	ggattcctca	gagccctgat	1140
gactcagata	gcagctatgg	ttcccactcc	actgacagcc	tcatggggtc	ctcccctgtt	1200
ttcaaccagc	gctgcaagaa	gaggatgagg	aaaatataa			1239

Met	Leu	Arg	Tyr	Trp	Gly	Glu	Ile	Pro	Ile	Ser	Ser	Ser	Gln	Thr	Asn
1				5				10					15		
Arg	Ser	Ser	Phe	Asp	Leu	Leu	Pro	Arg	Glu	Phe	Arg	Leu	Val	Glu	Val
			20					25					30		
His	Asp	Pro	Pro	Leu	His	Gln	Pro	Ser	Ala	Asn	Lys	Pro	Lys	Pro	Pro
			35					40					45		
Thr	Met	Leu	Asp	Ile	Pro	Ser	Glu	Pro	Cys	Ser	Leu	Thr	Ile	His	Thr
			50					55					60		
Ile	Gln	Leu	Ile	Gln	His	Asn	Arg	Arg	Leu	Arg	Asn	Leu	Ile	Ala	Thr
65						70				75				80	
Ala	Gln	Ala	Gln	Asn	Gln	Gln	Gln	Thr	Glu	Gly	Val	Lys	Thr	Glu	Glu
				85						90				95	
Ser	Glu	Pro	Leu	Pro	Ser	Cys	Pro	Gly	Ser	Pro	Pro	Leu	Pro	Asp	Asp
			100					105					110		
Leu	Leu	Pro	Leu	Asp	Cys	Lys	Asn	Pro	Asn	Ala	Pro	Phe	Gln	Ile	Arg
			115					120					125		

FIG.6A

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His Ser Asp Pro Glu Ser Asp Phe Tyr Arg Gly Lys Gly Glu Pro Val  
130 135 140  
Thr Glu Leu Ser Trp His Ser Cys Arg Gln Leu Leu Tyr Gln Ala Val  
145 150 155 160  
Ala Thr Ile Leu Ala His Ala Gly Phe Asp Cys Ala Asn Glu Ser Val  
165 170 175  
Leu Glu Thr Leu Thr Asp Val Ala His Glu Tyr Cys Leu Lys Phe Thr  
180 185 190  
Lys Leu Leu Arg Phe Ala Val Asp Arg Glu Ala Arg Leu Gly Gln Thr  
195 200 205  
Pro Phe Pro Asp Val Met Glu Gln Val Phe His Glu Val Gly Ile Gly  
210 215 220  
Ser Val Leu Ser Leu Gln Lys Phe Trp Gln His Arg Ile Lys Asp Tyr  
225 230 235 240  
His Ser Tyr Met Leu Gln Ile Ser Lys Gln Leu Ser Glu Glu Tyr Glu  
245 250 255  
Arg Ile Val Asn Pro Glu Lys Ala Thr Glu Asp Ala Lys Pro Val Lys  
260 265 270  
Ile Lys Glu Glu Pro Val Ser Asp Ile Thr Phe Pro Val Ser Glu Glu  
275 280 285  
Leu Glu Ala Asp Leu Ala Ser Gly Asp Gln Ser Leu Pro Met Gly Val  
290 295 300  
Leu Gly Ala Gln Ser Glu Arg Phe Pro Ser Asn Leu Glu Val Glu Ala  
305 310 315 320  
Ser Pro Gln Ala Ser Ser Ala Glu Val Asn Ala Ser Pro Leu Trp Asn  
325 330 335  
Leu Ala His Val Lys Met Glu Pro Gln Glu Ser Glu Glu Gly Asn Val  
340 345 350  
Ser Gly His Gly Val Leu Gly Ser Asp Val Phe Glu Glu Pro Met Ser  
355 360 365  
Gly Met Ser Glu Ala Gly Ile Pro Gln Ser Pro Asp Asp Ser Asp Ser  
370 375 380  
Ser Tyr Gly Ser His Ser Thr Asp Ser Leu Met Gly Ser Ser Pro Val  
385 390 395 400  
Phe Asn Gln Arg Cys Lys Lys Arg Met Arg Lys Ile  
405 410

FIG.6A-1

atgacccacc cctgcaccaa ccctcagcca acaagccgaa gccccccact atgctggaca  
tcccctcaga gccatgtagt ctcacatcc atacgattca gttga

60  
105

Met Thr His Pro Cys Thr Asn Pro Gln Pro Thr Ser Arg Ser Pro Pro  
1 5 10 15  
Leu Cys Trp Thr Ser Pro Gln Ser His Val Val Ser Pro Ser Ile Arg  
20 25 30  
Phe Ser

FIG.6B

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atgctggaca	tcccctcaga	gccatgtagt	ctcaccatcc	atacgattca	gttgattcag	60
cacaaccgac	gtcttcgcaa	ccttattgcc	acagctcagg	cccagaatca	gcagcagaca	120
gaaggtgtaa	aaactgaaga	gagtgaacct	cttcctcgt	gccctgggtc	acctcctctc	180
cctgatgacc	tcctgccttt	agattgtaag	aatcccaatg	caccattcca	gatccggcac	240
agtgaccag	agagtgactt	ttatcgtggg	aaaggggaac	ctgtgactga	actcagctgg	300
cactcctgtc	ggcagctcct	ctaccaggca	gtggccacaa	tcctggccca	cgcgggcttt	360
gactgtgcta	atgagagtgt	cctggagacc	ctaactgatg	tggcacatga	gtattgcctt	420
aagtttacca	agttgctgcg	ttttgctgtg	gaccgggagg	cccggctggg	acagactcct	480
tttcctgatg	tgatggagca	ggtattccat	gaagtgggta	ttggcagtgt	gctctccctc	540
cagaagttct	ggcagcaccg	catcaaggac	tatcacagtt	acatgctaca	gattagtaag	600
caactctctg	aagaatatga	aaggattgtc	aatcctgaga	aggccacaga	ggacgctaaa	660
cctgtgaaga	tcaaggagga	acctgtgagc	gacatcactt	ttcctgtcag	tgaggagctg	720
gaggctgacc	ttgcttctgg	agaccagtca	ctgcctatgg	gagtgtttgg	ggctcagagc	780
gaacgcttcc	catctaacct	ggaggttgaa	gcttcaccac	aggcttcaag	tgcagaggta	840
aatgcttctc	ctctttggaa	tctggcccat	gtgaaaatgg	agcctcaaga	aagtgaagaa	900
ggcaatgtct	ctgggcatgg	tgtgctgggc	agtgatgtct	tcgaggagcc	tatgtcaggc	960
atgagtgaag	ctgggattcc	tcagagccct	gatgactcag	atagcagcta	tggttcccac	1020
tccactgaca	gcctcatggg	gtcctcccct	gttttcaacc	agcgtgcaa	gaagaggatg	1080
aggaaaatat	aa					1092

Met	Leu	Asp	Ile	Pro	Ser	Glu	Pro	Cys	Ser	Leu	Thr	Ile	His	Thr	Ile
1			5					10					15		
Gln	Leu	Ile	Gln	His	Asn	Arg	Arg	Leu	Arg	Asn	Leu	Ile	Ala	Thr	Ala
		20						25					30		
Gln	Ala	Gln	Asn	Gln	Gln	Gln	Thr	Glu	Gly	Val	Lys	Thr	Glu	Glu	Ser
		35					40					45			
Glu	Pro	Leu	Pro	Ser	Cys	Pro	Gly	Ser	Pro	Pro	Leu	Pro	Asp	Asp	Leu
		50					55				60				
Leu	Pro	Leu	Asp	Cys	Lys	Asn	Pro	Asn	Ala	Pro	Phe	Gln	Ile	Arg	His
65					70					75				80	
Ser	Asp	Pro	Glu	Ser	Asp	Phe	Tyr	Arg	Gly	Lys	Gly	Glu	Pro	Val	Thr
			85						90					95	
Glu	Leu	Ser	Trp	His	Ser	Cys	Arg	Gln	Leu	Leu	Tyr	Gln	Ala	Val	Ala
			100					105					110		
Thr	Ile	Leu	Ala	His	Ala	Gly	Phe	Asp	Cys	Ala	Asn	Glu	Ser	Val	Leu
		115				120						125			
Glu	Thr	Leu	Thr	Asp	Val	Ala	His	Glu	Tyr	Cys	Leu	Lys	Phe	Thr	Lys
		130				135					140				
Leu	Leu	Arg	Phe	Ala	Val	Asp	Arg	Glu	Ala	Arg	Leu	Gly	Gln	Thr	Pro
145					150					155					160
Phe	Pro	Asp	Val	Met	Glu	Gln	Val	Phe	His	Glu	Val	Gly	Ile	Gly	Ser
				165					170					175	
Val	Leu	Ser	Leu	Gln	Lys	Phe	Trp	Gln	His	Arg	Ile	Lys	Asp	Tyr	His
			180					185					190		
Ser	Tyr	Met	Leu	Gln	Ile	Ser	Lys	Gln	Leu	Ser	Glu	Glu	Tyr	Glu	Arg
		195					200					205			
Ile	Val	Asn	Pro	Glu	Lys	Ala	Thr	Glu	Asp	Ala	Lys	Pro	Val	Lys	Ile
		210					215					220			

FIG.6C

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Lys Glu Glu Pro Val Ser Asp Ile Thr Phe Pro Val Ser Glu Glu Leu  
225 230 235 240  
Glu Ala Asp Leu Ala Ser Gly Asp Gln Ser Leu Pro Met Gly Val Leu  
245 250 255  
Gly Ala Gln Ser Glu Arg Phe Pro Ser Asn Leu Glu Val Glu Ala Ser  
260 265 270  
Pro Gln Ala Ser Ser Ala Glu Val Asn Ala Ser Pro Leu Trp Asn Leu  
275 280 285  
Ala His Val Lys Met Glu Pro Gln Glu Ser Glu Glu Gly Asn Val Ser  
290 295 300  
Gly His Gly Val Leu Gly Ser Asp Val Phe Glu Glu Pro Met Ser Gly  
305 310 315 320  
Met Ser Glu Ala Gly Ile Pro Gln Ser Pro Asp Asp Ser Asp Ser Ser  
325 330 335  
Tyr Gly Ser His Ser Thr Asp Ser Leu Met Gly Ser Ser Pro Val Phe  
340 345 350  
Asn Gln Arg Cys Lys Lys Arg Met Arg Lys Ile  
355 360

FIG.6C-1

042261.060301  
T06080" T092260

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atgacctcct gccttttag

18

Met Thr Ser Cys Leu  
 1 5

## FIG.6D

atgcaccatt ccagatccgg cacagtgacc cagagagtga cttttatcgt gggaaagggg  
 aacctgtga

60  
 69

Met His His Ser Arg Ser Gly Thr Val Thr Gln Arg Val Thr Phe Ile  
 1 5 10 15  
 Val Gly Lys Gly Asn Leu  
 20

## FIG.6E

atgagagtgt cctggagacc ctaa

24

Met Arg Val Ser Trp Arg Pro  
 1 5

## FIG.6F

atgtggcaca tgagtattgc cttaagttta ccaagttgct gcgttttgct gtggaccggg  
 aggcccggt gggacagact ctttttcctg atgtga

60  
 96

Met Trp His Met Ser Ile Ala Leu Ser Leu Pro Ser Cys Cys Val Leu  
 1 5 10 15  
 Leu Trp Thr Gly Arg Pro Gly Trp Asp Arg Leu Leu Phe Leu Met  
 20 25 30

## FIG.6G

atgagtattg ccttaagttt accaagttgc tgcgttttgct tgtggaccgg gaggcccggc  
 tgggacagac tccttttcct gatgtga

60  
 87

Met Ser Ile Ala Leu Ser Leu Pro Ser Cys Cys Val Leu Leu Trp Thr  
 1 5 10 15  
 Gly Arg Pro Gly Trp Asp Arg Leu Leu Phe Leu Met  
 20 25

## FIG.6H

FIG. 6A-6H

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atggagcagg	tattccatga	agtgggtatt	ggcagtgtgc	tctccctcca	gaagttctgg	60
cagcaccgca	tcaaggacta	tcacagttac	atgctacaga	ttagtaagca	actctctgaa	120
gaatatgaaa	ggattgtcaa	tcctgagaag	gccacagagg	acgctaaacc	tgtgaagatc	180
aaggaggaac	ctgtgagcga	catcactttt	cctgtcagtg	aggagctgga	ggctgacctt	240
gcttctggag	accagtcact	gcctatggga	gtgcttgggg	ctcagagcga	acgcttccca	300
tctaacctgg	aggttgaagc	ttcaccacag	gcttcaagtg	cagaggtaaa	tgcttctcct	360
ctttggaatc	tggcccatgt	gaaaatggag	cctcaagaaa	gtgaagaagg	caatgtctct	420
gggcatgggt	tgctgggcag	tgatgtcttc	gaggagccta	tgtcaggcat	gagtgaagct	480
gggattcctc	agagccctga	tgactcagat	agcagctatg	gttcccactc	cactgacagc	540
ctcatgggggt	cctcccctgt	tttcaaccag	cgctgcaaga	agaggatgag	gaaaatataa	600

Met	Glu	Gln	Val	Phe	His	Glu	Val	Gly	Ile	Gly	Ser	Val	Leu	Ser	Leu
1				5				10					15		
Gln	Lys	Phe	Trp	Gln	His	Arg	Ile	Lys	Asp	Tyr	His	Ser	Tyr	Met	Leu
			20					25					30		
Gln	Ile	Ser	Lys	Gln	Leu	Ser	Glu	Glu	Tyr	Glu	Arg	Ile	Val	Asn	Pro
			35					40					45		
Glu	Lys	Ala	Thr	Glu	Asp	Ala	Lys	Pro	Val	Lys	Ile	Lys	Glu	Glu	Pro
			50					55					60		
Val	Ser	Asp	Ile	Thr	Phe	Pro	Val	Ser	Glu	Glu	Leu	Glu	Ala	Asp	Leu
65					70					75				80	
Ala	Ser	Gly	Asp	Gln	Ser	Leu	Pro	Met	Gly	Val	Leu	Gly	Ala	Gln	Ser
				85					90					95	
Glu	Arg	Phe	Pro	Ser	Asn	Leu	Glu	Val	Glu	Ala	Ser	Pro	Gln	Ala	Ser
			100						105					110	
Ser	Ala	Glu	Val	Asn	Ala	Ser	Pro	Leu	Trp	Asn	Leu	Ala	His	Val	Lys
			115						120					125	
Met	Glu	Pro	Gln	Glu	Ser	Glu	Glu	Gly	Asn	Val	Ser	Gly	His	Gly	Val
130								135						140	
Leu	Gly	Ser	Asp	Val	Phe	Glu	Glu	Pro	Met	Ser	Gly	Met	Ser	Glu	Ala
145					150					155				160	
Gly	Ile	Pro	Gln	Ser	Pro	Asp	Asp	Ser	Asp	Ser	Ser	Tyr	Gly	Ser	His
				165					170					175	
Ser	Thr	Asp	Ser	Leu	Met	Gly	Ser	Ser	Pro	Val	Phe	Asn	Gln	Arg	Cys
			180						185					190	
Lys	Lys	Arg	Met	Arg	Lys	Ile									
			195												

FIG 6I



Year	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

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atgaaaggat tgtcaatcct gagaaggcca cagaggacgc taaacctgtg a

51

Met Lys Gly Leu Ser Ile Leu Arg Arg Pro Gln Arg Thr Leu Asn Leu  
 1 5 10 15

## FIG.6L

atgggagtgct ttggggctca gagcgaacgc ttcccatcta acctggaggt tgaagcttca 60  
 ccacaggctt caagtgcaga ggtaaagtgt tctcctcttt ggaatctggc ccatgtgaaa 120  
 atggagcctc aagaaagtga agaaggcaat gtctctgggc atggtgtgct gggcagtgat 180  
 gtcttcgagg agcctatgtc aggcattgag gaagctggga ttcctcagag ccctgatgac 240  
 tcagatagca gctatggttc ccactccact gacagcctca tggggtcctc ccctgttttc 300  
 aaccagcgct gcaagaagag gatgaggaaa atataa 336

Met Gly Val Leu Gly Ala Gln Ser Glu Arg Phe Pro Ser Asn Leu Glu  
 1 5 10 15  
 Val Glu Ala Ser Pro Gln Ala Ser Ser Ala Glu Val Asn Ala Ser Pro  
 20 25 30  
 Leu Trp Asn Leu Ala His Val Lys Met Glu Pro Gln Glu Ser Glu Glu  
 35 40 45  
 Gly Asn Val Ser Gly His Gly Val Leu Gly Ser Asp Val Phe Glu Glu  
 50 55 60  
 Pro Met Ser Gly Met Ser Glu Ala Gly Ile Pro Gln Ser Pro Asp Asp  
 65 70 75 80  
 Ser Asp Ser Ser Tyr Gly Ser His Ser Thr Asp Ser Leu Met Gly Ser  
 85 90 95  
 Ser Pro Val Phe Asn Gln Arg Cys Lys Lys Arg Met Arg Lys Ile  
 100 105 110

## FIG.6M

atgcttctcc tctttggaat ctggcccatg tga

33

Met Leu Leu Leu Phe Gly Ile Trp Pro Met  
 1 5 10

## FIG.6N

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atg gag cct caa gaa agt gaa gaa ggc aat gtc tct ggg cat ggt gtg	48
ctg ggc agt gat gtc ttc gag gag cct atg tca ggc atg agt gaa gct	96
ggg att cct cag agc cct gat gac tca gat agc agc tat ggt tcc cac	144
tcc act gac agc ctc atg ggg tcc tcc cct gtt ttc aac cag cgc tgc	192
aag aag agg atg agg aaa ata taa	216

Met Glu Pro Gln Glu Ser Glu Glu Gly Asn Val Ser Gly His Gly Val	
1 5 10 15	
Leu Gly Ser Asp Val Phe Glu Glu Pro Met Ser Gly Met Ser Glu Ala	
20 25 30	
Gly Ile Pro Gln Ser Pro Asp Asp Ser Asp Ser Ser Tyr Gly Ser His	
35 40 45	
Ser Thr Asp Ser Leu Met Gly Ser Ser Pro Val Phe Asn Gln Arg Cys	
50 55 60	
Lys Lys Arg Met Arg Lys Ile	
65 70	

### FIG.60

atgtctcttg gcatggtgtg ctgggcagtg atgtcttcga ggagcctatg tcaggcatga	60
---	----

Met Ser Leu Gly Met Val Cys Trp Ala Val Met Ser Ser Arg Ser Leu	
1 5 10 15	
Cys Gln Ala	

### FIG.6P

atggtgtgct gggcagtgat gtcttcgagg agcctatgtc aggcatga	48
--	----

Met Val Cys Trp Ala Val Met Ser Ser Arg Ser Leu Cys Gln Ala	
1 5 10 15	

### FIG 6Q

atgtcttcga ggagcctatg tcaggcatga	30
----------------------------------	----

Met Ser Ser Arg Ser Leu Cys Gln Ala	
1 5	

### FIG 6R

atgtcaggca tgagtgaagc tgggattcct cagagccctg atgactcaga tagcagctat	60
ggttcccact ccactgacag cctcatgggg tcctcccctg ttttcaacca gcgctgcaag	120
aagaggatga ggaaaatata a	141

Met Ser Gly Met Ser Glu Ala Gly Ile Pro Gln Ser Pro Asp Asp Ser	
1 5 10 15	
Asp Ser Ser Tyr Gly Ser His Ser Thr Asp Ser Leu Met Gly Ser Ser	
20 25 30	
Pro Val Phe Asn Gln Arg Cys Lys Lys Arg Met Arg Lys Ile	
35 40 45	

### FIG 6S

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atgagtgaag ctgggattcc tcagagccct gatgactcag atagcagcta tggttccac 60  
tccactgaca gcctcatggg gtctcccct gttttcaacc agcgctgcaa gaagaggatg 120  
aggaaaaatat aa 132

Met Ser Glu Ala Gly Ile Pro Gln Ser Pro Asp Asp Ser Asp Ser Ser  
1 5 10 15  
Tyr Gly Ser His Ser Thr Asp Ser Leu Met Gly Ser Ser Pro Val Phe  
20 25 30  
Asn Gln Arg Cys Lys Lys Arg Met Arg Lys Ile  
35 40

### FIG.6T

atgactcaga tagcagctat ggttcccact ccactgacag cctcatgggg tcctcccctg 60  
ttttcaacca gcgctgcaag aagaggatga 90

Met Thr Gln Ile Ala Ala Met Val Pro Thr Pro Leu Thr Ala Ser Trp  
1 5 10 15  
Gly Pro Pro Leu Phe Ser Thr Ser Ala Ala Arg Arg Gly  
20 25

### FIG.6U

atggttccca ctccactgac agcctcatgg ggtcctcccc tgttttcaac cagcgctgca 60  
agaagaggat ga 72

Met Val Pro Thr Pro Leu Thr Ala Ser Trp Gly Pro Pro Leu Phe Ser  
1 5 10 15  
Thr Ser Ala Ala Arg Arg Gly  
20

### FIG.6V

atggggtcct cccctgtttt caaccagcgc tgcaagaaga ggatgaggaa aatataa 57  
Met Gly Ser Ser Pro Val Phe Asn Gln Arg Cys Lys Lys Arg Met Arg  
1 5 10 15  
Lys Ile

### FIG.6W

atgaggaaaa tataa 15  
Met Arg Lys Ile  
1

### FIG.6X

atgttttgtc cagacctact agaccaaca gaaaaggtta gctga 45  
Met Phe Cys Pro Asp Leu Leu Asp Pro Thr Glu Lys Val Ser  
1 5 10

### FIG.6Y

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atgtattttg ctgagctgta caacaggatg gcacaaaatc ctgctgatag aaataagtgt 60  
 aaccggccag gcacagtggc tcatgcctgt aatcccagca ttttgggagg cccaggtggg 120  
 tggatcatct ga 132

Met Tyr Phe Ala Glu Leu Tyr Asn Arg Met Ala Gln Asn Pro Ala Asp  
 1 5 10 15  
 Arg Asn Lys Cys Asn Arg Pro Gly Thr Val Ala His Ala Cys Asn Pro  
 20 25 30  
 Ser Ile Leu Gly Gly Pro Gly Gly Trp Ile Ile  
 35 40

## FIG.6Z

atggcacaaa atcctgctga tagaaataag tgtaaccggc caggcacagt ggctcatgcc 60  
 tgtaatccca gcattttggg aggccaggt gggtggatca tctga 105

Met Ala Gln Asn Pro Ala Asp Arg Asn Lys Cys Asn Arg Pro Gly Thr  
 1 5 10 15  
 Val Ala His Ala Cys Asn Pro Ser Ile Leu Gly Gly Pro Gly Gly Trp  
 20 25 30  
 Ile Ile

## FIG.6AA

atgcctgtaa tcccagcatt ttgggaggcc caggtgggtg gatcatctga ggtaaggagt 60  
 tcgagaccag cctga 75

Met Pro Val Ile Pro Ala Phe Trp Glu Ala Gln Val Gly Gly Ser Ser  
 1 5 10 15  
 Glu Val Arg Ser Ser Arg Pro Ala  
 20

## FIG.6AB

atggaaaaaa cccatctct actaaaaata caaaattag 39

Met Glu Lys Thr Pro Ser Leu Leu Lys Ile Gln Asn  
 1 5 10

## FIG.6AC

atgcctgtaa tcccagctac tcaggaaggc tga 33

Met Pro Val Ile Pro Ala Thr Gln Glu Gly  
 1 5 10

## FIG.6AD

0922661.0303

**Figure 6**

Diagram illustrating the relationship between the number of species ( $S$ ) and the number of individuals ( $N$ ) in a community. The x-axis represents the number of individuals ( $N$ ) and the y-axis represents the number of species ( $S$ ). The curve shows that as the number of individuals increases, the number of species also increases, following a power-law relationship.

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atgtttggaa ctctgaagga tttagacaag gttttgaaaa ggataatcat gggtttag 57

Met Phe Gly Thr Leu Lys Asp Leu Asp Lys Val Leu Lys Arg Ile Ile  
1 5 10 15

FIG.7F

atggtgaaac cctgtttcta taaaaataaa 30

Met Val Lys Pro Cys Phe Tyr Lys Lys  
1 5

FIG.7G

atgcctgtgg tcccagctac tgaggaggct gaggtgggag gattgcttga gcccaggagg 60  
cagaggttgc agtga 75

Met Pro Val Val Pro Ala Thr Glu Glu Ala Glu Val Gly Gly Leu Leu  
1 5 10 15  
Glu Pro Arg Arg Gln Arg Leu Gln  
20

FIG.7H

FIG. 7A-7H

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atgtgtccca tgtgggttgt gccaggtaga gaaacaggaa gtcaatcatc tgtgacagtc 60  
tctattctgt cgttttgctc ctggtatatt gatttgcaat atatattag 108

Met Cys Pro Met Trp Val Val Pro Gly Arg Glu Thr Gly Ser Gln Ser  
1 5 10 15  
Ser Val Thr Val Ser Ile Leu Ser Phe Cys Ser Leu Val Phe Asp Leu  
20 25 30  
His Tyr Ile  
35

## FIG.8A

atgtgggttg tgccaggtag agaaacagga agtcaatcat ctgtgacagt ctctattctg 60  
tcgttttgct ccttggtatt tgatttgcac tatatttag 99

Met Trp Val Val Pro Gly Arg Glu Thr Gly Ser Gln Ser Ser Val Thr  
1 5 10 15  
Val Ser Ile Leu Ser Phe Cys Ser Leu Val Phe Asp Leu His Tyr Ile  
20 25 30

## FIG.8B

atggagacct ggttcagta a 21

Met Glu Thr Trp Phe Gln  
1 5

## FIG.8C

atgtcccacc agtgggggtat agaaagcatg ctcatgaccc tgccgtgtcg tctgaggtac 60  
ccgttcttat cctag 75

Met Ser His Gln Trp Gly Ile Glu Ser Met Leu Met Thr Leu Pro Cys  
1 5 10 15  
Arg Leu Arg Tyr Pro Phe Leu Ser  
20

## FIG.8D

atgctcatga ccctgccgtg tcgtctgagg taccggttct taccctag 48

Met Leu Met Thr Leu Pro Cys Arg Leu Arg Tyr Pro Phe Leu Ser  
1 5 10 15

## FIG.8E

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atgaccctgc cgtgtcgtct gaggtacccg ttcttaccct ag  
42

Met Thr Leu Pro Cys Arg Leu Arg Tyr Pro Phe Leu Ser  
1 5 10

## FIG.8F

atgttatctc cttgctttgc tttttgccgt tttaaaatgt gtaattgttc cagcattcca 60  
atggtcttgt gcatagcagg ggactgtaac caaaaataa 99

Met Leu Ser Pro Cys Phe Ala Phe Cys Arg Phe Lys Met Cys Asn Cys  
1 5 10 15  
Ser Ser Ile Pro Met Val Leu Cys Ile Ala Gly Asp Cys Asn Gln Lys  
20 25 30

## FIG.8G

atgtgtaatt gttccagcat tccaatgggtc ttgtgcatag caggggactg taaccaaaaa 60  
taa 63

Met Cys Asn Cys Ser Ser Ile Pro Met Val Leu Cys Ile Ala Gly Asp  
1 5 10 15  
Cys Asn Gln Lys  
20

## FIG.8H

atggtcttgt gcatagcagg ggactgtaac caaaaataa 39

Met Val Leu Cys Ile Ala Gly Asp Cys Asn Gln Lys  
1 5 10

## FIG.8I

atgtatttgt gtaattgggt tgaagaagtc ttgaatagct ctttactgtc ttacttgggg 60  
ttgataagat ttgagtgttt gcaatttttt actaaatgta gtcctcaaagt cttaaattggc 120  
ttgtttgttc ttaaactgtt aattgatgaa actgtgcata agtttacaat gtactaa 177

Met Tyr Leu Cys Asn Trp Phe Glu Glu Val Leu Asn Ser Ser Leu Leu  
1 5 10 15  
Ser Tyr Leu Gly Leu Ile Arg Phe Glu Cys Leu Gln Phe Phe Thr Lys  
20 25 30  
Cys Ser Ser Lys Val Leu Asn Gly Leu Phe Val Leu Lys Leu Leu Ile  
35 40 45  
Asp Glu Thr Val His Lys Phe Thr Met Tyr  
50 55

## FIG.8J

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atggcttgtt tgttcttaaa ctgttaa

27

Met Ala Cys Leu Phe Leu Asn Cys

1

5

## FIG.8K

atgaaactgt gcataagttt acaatgtact aacttatttt gcttattata tatagtgttt  
tattggaaat tgtaa

60

75

Met Lys Leu Cys Ile Ser Leu Gln Cys Thr Asn Leu Phe Cys Leu Leu

1

5

10

15

Tyr Ile Val Phe Tyr Trp Lys Leu

20

## FIG.8L

atgatgaaaa taaagattag tgtttccatt taa

33

Met Met Lys Ile Lys Ile Ser Val Ser Ile

1

5

10

## FIG.8M

atgaaaataa agattagtgt ttccatttaa

30

Met Lys Ile Lys Ile Ser Val Ser Ile

1

5

## FIG.8N

atgttttatc ctccataaa aaaaaaaaaa aaaagggcgg cc

42

Met Phe Tyr Pro Pro Ile Lys Lys Lys Lys Arg Ala Ala

1

5

10

## FIG.8O

FIG. 8K-8O

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atgccccaaa	gaaagccaaa	gagaagatct	gccaggttgt	ctgctatgct	tgtgccagtt	60
acaccagagg	tgaagcctaa	aagaacatca	agttcaagga	aatgaagac	aaaaagtgat	120
atgatggaag	aaaacataga	tacaagtgcc	caagcagttg	ctgaaaccaa	gcaagaagca	180
gttgttgaag	aagactacaa	tgaaaatgct	aaaaatggag	aagccaaaat	tacagaggca	240
ccagcttctg	aaaaagaaat	tgtggaagta	aaagaagaaa	atattgaaga	tgccacagaa	300
aagggaggag	aaaagaaaga	agcagtggca	gcagaagtaa	aaaatgaaga	agaagatcag	360
aaagaagatg	aagaagatca	aaacgaagag	aaaggggaag	ctggaaaaga	agacaaagat	420
gaaaaagggg	aagaagatgg	aaaagaggat	aaaaatggaa	atgagaaagg	agaagatgca	480
aaagagaaaag	aagatggaaa	aaaaggtgaa	gacggaaaag	gaaatggaga	agatggaaaa	540
gagaaaggag	aagatgaaaa	agaggaagaa	gacagaaaaag	aaacaggagt	tggaagagag	600
aatgaagatg	gaaaagagaa	gggagataaa	aaagagggga	aagatgtaaa	agtcaaagaa	660
gatgaaaaag	agagagaaga	tggaagaaag	gatgaaggtg	gaaatgagga	agaagctgga	720
aaagagaaaag	aagatttaaa	agaagaggaa	gaaggaaaag	aggaagatga	gatcaaagaa	780
gatgatggaa	aaaaagagga	gccacagagt	attgttttaa			819

Met	Pro	Lys	Arg	Lys	Pro	Lys	Arg	Arg	Ser	Ala	Arg	Leu	Ser	Ala	Met
1				5					10					15	
Leu	Val	Pro	Val	Thr	Pro	Glu	Val	Lys	Pro	Lys	Arg	Thr	Ser	Ser	Ser
			20					25					30		
Arg	Lys	Met	Lys	Thr	Lys	Ser	Asp	Met	Met	Glu	Glu	Asn	Ile	Asp	Thr
		35					40					45			
Ser	Ala	Gln	Ala	Val	Ala	Glu	Thr	Lys	Gln	Glu	Ala	Val	Val	Glu	Glu
		50				55					60				
Asp	Tyr	Asn	Glu	Asn	Ala	Lys	Asn	Gly	Glu	Ala	Lys	Ile	Thr	Glu	Ala
65					70				75					80	
Pro	Ala	Ser	Glu	Lys	Glu	Ile	Val	Glu	Val	Lys	Glu	Glu	Asn	Ile	Glu
			85					90					95		
Asp	Ala	Thr	Glu	Lys	Gly	Gly	Glu	Lys	Lys	Glu	Ala	Val	Ala	Ala	Glu
			100					105					110		
Val	Lys	Asn	Glu	Glu	Glu	Asp	Gln	Lys	Glu	Asp	Glu	Glu	Asp	Gln	Asn
		115					120					125			
Glu	Glu	Lys	Gly	Glu	Ala	Gly	Lys	Glu	Asp	Lys	Asp	Glu	Lys	Gly	Glu
		130				135					140				
Glu	Asp	Gly	Lys	Glu	Asp	Lys	Asn	Gly	Asn	Glu	Lys	Gly	Glu	Asp	Ala
145					150					155				160	
Lys	Glu	Lys	Glu	Asp	Gly	Lys	Lys	Gly	Glu	Asp	Gly	Lys	Gly	Asn	Gly
			165					170					175		
Glu	Asp	Gly	Lys	Glu	Lys	Gly	Glu	Asp	Glu	Lys	Glu	Glu	Glu	Asp	Arg
			180					185					190		
Lys	Glu	Thr	Gly	Val	Gly	Lys	Glu	Asn	Glu	Asp	Gly	Lys	Glu	Lys	Gly
		195					200						205		

FIG.9A

092361-03031

Asp 210	Lys	Lys	Glu	Gly	Lys	Asp 215	Val	Lys	Val	Lys	Glu 220	Asp	Glu	Lys	Glu
Arg 225	Glu	Asp	Gly	Lys	Glu	Asp 230	Glu	Gly	Gly	Asn 235	Glu	Glu	Glu	Ala	Gly 240
Lys	Glu	Lys	Glu	Asp 245	Leu	Lys	Glu	Glu	Glu 250	Glu	Gly	Lys	Glu	Glu	Asp 255
Glu	Ile	Lys	Glu	Asp	Asp	Gly	Lys	Lys 265	Glu	Glu	Pro	Gln	Ser	Ile	Val 270

**FIG.9A-1**

[illegible]

FIG. 9B

Met 1	Lys	Thr	Lys	Ser 5	Asp	Met	Met	Glu	Glu	Asn	Ile	Asp	Thr	Ser 15	Ala
Gln	Ala	Val	Ala	Glu	Thr	Lys	Gln	Glu	Ala	Val	Val	Glu	Glu	Asp	Tyr
			20					25					30		
Asn	Glu	Asn	Ala	Lys	Asn	Gly	Glu	Ala	Lys	Ile	Thr	Glu	Ala	Pro	Ala
		35					40					45			
Ser	Glu	Lys	Glu	Ile	Val	Glu	Val	Lys	Glu	Glu	Asn	Ile	Glu	Asp	Ala
	50					55					60				
Thr	Glu	Lys	Gly	Gly	Glu	Lys	Lys	Glu	Ala	Val	Ala	Ala	Glu	Val	Lys
65					70					75					80
Asn	Glu	Glu	Glu	Asp	Gln	Lys	Glu	Asp	Glu	Glu	Asp	Gln	Asn	Glu	Glu
				85					90					95	
Lys	Gly	Glu	Ala	Gly	Lys	Glu	Asp	Lys	Asp	Glu	Lys	Gly	Glu	Glu	Asp
			100					105					110		
Gly	Lys	Glu	Asp	Lys	Asn	Gly	Asn	Glu	Lys	Gly	Glu	Asp	Ala	Lys	Glu
		115					120					125			
Lys	Glu	Asp	Gly	Lys	Lys	Gly	Glu	Asp	Gly	Lys	Gly	Asn	Gly	Glu	Asp
	130					135					140				
Gly	Lys	Glu	Lys	Gly	Glu	Asp	Glu	Lys	Glu	Glu	Glu	Asp	Arg	Lys	Glu
145					150					155					160
Thr	Gly	Val	Gly	Lys	Glu	Asn	Glu	Asp	Gly	Lys	Glu	Lys	Gly	Asp	Lys
				165					170					175	
Lys	Glu	Gly	Lys	Asp	Val	Lys	Val	Lys	Glu	Asp	Glu	Lys	Glu	Arg	Glu
			180					185					190		
Asp	Gly	Lys	Glu	Asp	Glu	Gly	Gly	Asn	Glu	Glu	Glu	Ala	Gly	Lys	Glu
		195					200					205			
Lys	Glu	Asp	Leu	Lys	Glu	Glu	Glu	Glu	Gly	Lys	Glu	Glu	Asp	Glu	Ile
	210					215					220				
Lys	Glu	Asp	Asp	Gly	Lys	Lys	Glu	Glu	Pro	Gln	Ser	Ile	Val		
225					230					235					

**FIG. 9C**

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atgatggaag	aaaacataga	tacaagtgcc	caagcagttg	ctgaaaccaa	gcaagaagca	60
gttggtgaag	aagactacaa	tgaaaatgct	aaaaatggag	aagccaaaat	tacagaggca	120
ccagcttctg	aaaaagaaat	tgtggaagta	aaagaagaaa	atattgaaga	tgccacagaa	180
aagggaggag	aaaagaaaaga	agcagtggca	gcagaagtaa	aaaatgaaga	agaagatcag	240
aaagaagatg	aagaagatca	aaacgaagag	aaaggggaag	ctggaaaaga	agacaaagat	300
gaaaaagggg	aagaagatgg	aaaagaggat	aaaaatggaa	atgagaaaagg	agaagatgca	360
aaagagaaaag	aagatggaaa	aaaaggtgaa	gacggaaaag	gaaatggaga	agatggaaaa	420
gagaaaggag	aagatgaaaa	agaggaagaa	gacagaaaag	aaacaggagt	tggaagagag	480
aatgaagatg	gaaaagagaa	gggagataaa	aaagagggga	aagatgtaaa	agtcaaagaa	540
gatgaaaaag	agagagaaga	tggaaaagaa	gatgaagggtg	gaaatgagga	agaagctgga	600
aaagagaaaag	aagatttaaa	agaagaggaa	gaaggaaaag	aggaagatga	gatcaaagaa	660
gatgatggaa	aaaaagagga	gccacagagt	attgtttaa			699

Met	Met	Glu	Glu	Asn	Ile	Asp	Thr	Ser	Ala	Gln	Ala	Val	Ala	Glu	Thr
1				5					10					15	
Lys	Gln	Glu	Ala	Val	Val	Glu	Glu	Asp	Tyr	Asn	Glu	Asn	Ala	Lys	Asn
			20					25					30		
Gly	Glu	Ala	Lys	Ile	Thr	Glu	Ala	Pro	Ala	Ser	Glu	Lys	Glu	Ile	Val
			35				40					45			
Glu	Val	Lys	Glu	Glu	Asn	Ile	Glu	Asp	Ala	Thr	Glu	Lys	Gly	Gly	Glu
	50				55				60						
Lys	Lys	Glu	Ala	Val	Ala	Ala	Glu	Val	Lys	Asn	Glu	Glu	Glu	Asp	Gln
65					70				75					80	
Lys	Glu	Asp	Glu	Glu	Asp	Gln	Asn	Glu	Glu	Lys	Gly	Glu	Ala	Gly	Lys
			85					90					95		
Glu	Asp	Lys	Asp	Glu	Lys	Gly	Glu	Glu	Asp	Gly	Lys	Glu	Asp	Lys	Asn
			100					105					110		
Gly	Asn	Glu	Lys	Gly	Glu	Asp	Ala	Lys	Glu	Lys	Glu	Asp	Gly	Lys	Lys
	115					120						125			
Gly	Glu	Asp	Gly	Lys	Gly	Asn	Gly	Glu	Asp	Gly	Lys	Glu	Lys	Gly	Glu
	130					135						140			
Asp	Glu	Lys	Glu	Glu	Glu	Asp	Arg	Lys	Glu	Thr	Gly	Val	Gly	Lys	Glu
145					150				155					160	
Asn	Glu	Asp	Gly	Lys	Glu	Lys	Gly	Asp	Lys	Lys	Glu	Gly	Lys	Asp	Val
			165					170					175		
Lys	Val	Lys	Glu	Asp	Glu	Lys	Glu	Arg	Glu	Asp	Gly	Lys	Glu	Asp	Glu
			180					185					190		
Gly	Gly	Asn	Glu	Glu	Glu	Ala	Gly	Lys	Glu	Lys	Glu	Asp	Leu	Lys	Glu
	195					200						205			
Glu	Glu	Glu	Gly	Lys	Glu	Glu	Asp	Glu	Ile	Lys	Glu	Asp	Asp	Gly	Lys
	210					215						220			
Lys	Glu	Glu	Pro	Gln	Ser	Ile	Val								
225					230										

FIG.9D

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atggaagaaa	acatagatac	aagtgcccaa	gcagttgctg	aaaccaagca	agaagcagtt	60
gttgaagaag	actacaatga	aatgctaaa	aatggagaag	ccaaaattac	agaggcacca	120
gcttctgaaa	aagaaattgt	ggaagtaaaa	gaagaaaata	ttgaagatgc	cacagaaaag	180
ggaggagaaa	agaaagaagc	agtggcagca	gaagtaaaaa	atgaagaaga	agatcagaaa	240
gaagatgaag	aagatcaaaa	cgaagagaaa	ggggaagctg	gaaaagaaga	caaagatgaa	300
aaaggggaag	aagatggaaa	agaggataaa	aatggaaatg	agaaaggaga	agatgcaaaa	360
gagaaagaag	atggaaaaaa	aggtgaagac	ggaaaaggaa	atggagaaga	tggaaaagag	420
aaaggagaag	atgaaaaaga	ggaagaagac	agaaaagaaa	caggagttgg	aaaagagaat	480
gaagatggaa	aagagaaggg	agataaaaaa	gaggggaaag	atgtaaaagt	caaagaagat	540
gaaaaagaga	gagaagatgg	aaaagaagat	gaaggtggaa	atgaggaaga	agctggaaaa	600
gagaaagaag	attttaaaga	agaggaagaa	ggaaaagagg	aagatgagat	caaagaagat	660
gatggaaaaa	aagaggagcc	acagagtatt	gtttaa			696

Met	Glu	Glu	Asn	Ile	Asp	Thr	Ser	Ala	Gln	Ala	Val	Ala	Glu	Thr	Lys
1			5						10					15	
Gln	Glu	Ala	Val	Val	Glu	Glu	Asp	Tyr	Asn	Glu	Asn	Ala	Lys	Asn	Gly
		20					25					30			
Glu	Ala	Lys	Ile	Thr	Glu	Ala	Pro	Ala	Ser	Glu	Lys	Glu	Ile	Val	Glu
		35					40					45			
Val	Lys	Glu	Glu	Asn	Ile	Glu	Asp	Ala	Thr	Glu	Lys	Gly	Gly	Glu	Lys
	50			55						60					
Lys	Glu	Ala	Val	Ala	Ala	Glu	Val	Lys	Asn	Glu	Glu	Glu	Asp	Gln	Lys
65				70					75					80	
Glu	Asp	Glu	Glu	Asp	Gln	Asn	Glu	Glu	Lys	Gly	Glu	Ala	Gly	Lys	Glu
			85					90					95		
Asp	Lys	Asp	Glu	Lys	Gly	Glu	Glu	Asp	Gly	Lys	Glu	Asp	Lys	Asn	Gly
		100						105					110		
Asn	Glu	Lys	Gly	Glu	Asp	Ala	Lys	Glu	Lys	Glu	Asp	Gly	Lys	Lys	Gly
		115				120						125			
Glu	Asp	Gly	Lys	Gly	Asn	Gly	Glu	Asp	Gly	Lys	Glu	Lys	Gly	Glu	Asp
	130				135						140				
Glu	Lys	Glu	Glu	Glu	Asp	Arg	Lys	Glu	Thr	Gly	Val	Gly	Lys	Glu	Asn
145				150					155					160	
Glu	Asp	Gly	Lys	Glu	Lys	Gly	Asp	Lys	Lys	Glu	Gly	Lys	Asp	Val	Lys
		165						170					175		
Val	Lys	Glu	Asp	Glu	Lys	Glu	Arg	Glu	Asp	Gly	Lys	Glu	Asp	Glu	Gly
		180					185					190			
Gly	Asn	Glu	Glu	Glu	Ala	Gly	Lys	Glu	Lys	Glu	Asp	Leu	Lys	Glu	Glu
	195						200					205			
Glu	Glu	Gly	Lys	Glu	Glu	Asp	Glu	Ile	Lys	Glu	Asp	Asp	Gly	Lys	Lys
	210					215					220				
Glu	Glu	Pro	Gln	Ser	Ile	Val									
225					230										

FIG.9E

0952251.030301





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atgaagaaga	agatcagaaa	gaagatgaag	aagatcaaaa	cgaagagaaa	ggggaagctg	60
gaaaagaaga	caaagatgaa	aaaggggaag	aagatggaaa	agaggataaa	aatggaaatg	120
agaaaggaga	agatgcaaaa	gagaaagaag	atggaaaaaa	aggtgaagac	ggaaaaggaa	180
atggagaaga	tggaaaagag	aaaggagaag	atgaaaaaga	ggaagaagac	agaaaagaaa	240
caggagttgg	aaaagagaat	gaagatggaa	aagagaaggg	agataaaaaa	gaggggaaag	300
atgtaa						306

Met	Lys	Lys	Lys	Ile	Arg	Lys	Lys	Met	Lys	Lys	Ile	Lys	Thr	Lys	Arg
1				5				10						15	
Lys	Gly	Lys	Leu	Glu	Lys	Lys	Thr	Lys	Met	Lys	Lys	Gly	Lys	Lys	Met
			20					25						30	
Glu	Lys	Arg	Ile	Lys	Met	Glu	Met	Arg	Lys	Glu	Lys	Met	Gln	Lys	Arg
			35					40						45	
Lys	Lys	Met	Glu	Lys	Lys	Val	Lys	Thr	Glu	Lys	Glu	Met	Glu	Lys	Met
			50					55						60	
Glu	Lys	Arg	Lys	Glu	Lys	Met	Lys	Lys	Arg	Lys	Lys	Thr	Glu	Lys	Lys
65						70						75			80
Gln	Glu	Leu	Glu	Lys	Arg	Met	Lys	Met	Glu	Lys	Arg	Arg	Glu	Ile	Lys
						85									95
Lys	Arg	Gly	Lys	Met											
															100

FIG.9J

atgaagaaga	tcaaaacgaa	gagaaagggg	aagctggaaa	agaagacaaa	gatgaaaaag	60
gggaagaaga	tggaaaagag	gataaaaaatg	gaaatgagaa	aggagaagat	gcaaaagaga	120
aagaagatgg	aaaaaaaggt	gaagacggaa	aaggaaatgg	agaagatgga	aaagagaaag	180
gagaagatga	aaaagaggaa	gaagacagaa	aagaaacagg	agttggaaaa	gagaatgaag	240
atggaaaaga	gaaggagat	aaaaaagagg	ggaaagatgt	aa		282

Met	Lys	Lys	Ile	Lys	Thr	Lys	Arg	Lys	Gly	Lys	Leu	Glu	Lys	Lys	Thr
1				5					10					15	
Lys	Met	Lys	Lys	Gly	Lys	Lys	Met	Glu	Lys	Arg	Ile	Lys	Met	Glu	Met
				20					25					30	
Arg	Lys	Glu	Lys	Met	Gln	Lys	Arg	Lys	Lys	Met	Glu	Lys	Lys	Val	Lys
				35					40					45	
Thr	Glu	Lys	Glu	Met	Glu	Lys	Met	Glu	Lys	Arg	Lys	Glu	Lys	Met	Lys
				50					55					60	
Lys	Arg	Lys	Lys	Thr	Glu	Lys	Lys	Gln	Glu	Leu	Glu	Lys	Arg	Met	Lys
65						70						75			80
Met	Glu	Lys	Arg	Arg	Glu	Ile	Lys	Lys	Arg	Gly	Lys	Met			
						85									90

FIG.9K

0992261-030301

Met Lys Lys Gly Lys Lys Met Glu Lys Arg Ile Lys Met Glu Met Arg  
1 5 10 15  
Lys Glu Lys Met Gln Lys Arg Lys Lys Met Glu Lys Lys Val Lys Thr  
20 25 30  
Glu Lys Glu Met Glu Lys Met Glu Lys Arg Lys Glu Lys Met Lys Lys  
35 40 45  
Arg Lys Lys Thr Glu Lys Lys Gln Glu Leu Glu Lys Arg Met Lys Met  
50 55 60  
Glu Lys Arg Arg Glu Ile Lys Lys Arg Gly Lys Met  
65 70 75

atggaaaaga	ggataaaaat	ggaaatgaga	aaggagaaga	tgcaaaagag	aaagaagatg	60
gaaaaaaagg	tgaagacgga	aaaggaaatg	gagaagatgg	aaaagagaaa	ggagaagatg	120
aaaaagagga	agaagacaga	aaagaaacag	gagttggaag	agagaatgaa	gatggaaaag	180
agaagggaga	taaaaaagag	gggaaagatg	taa			213

Met Glu Lys Arg Ile Lys Met Glu Met Arg Lys Glu Lys Met Gln Lys  
1 5 10 15  
Arg Lys Lys Met Glu Lys Lys Val Lys Thr Glu Lys Glu Met Glu Lys  
20 25 30  
Met Glu Lys Arg Lys Glu Lys Met Lys Lys Arg Lys Lys Thr Glu Lys  
35 40 45  
Lys Gln Glu Leu Glu Lys Arg Met Lys Met Glu Lys Arg Arg Glu Ile  
50 55 60  
Lys Lys Arg Gly Lys Met  
65 70

atggaaatga	gaaaggagaa	gatgcaaaa	agaaagaaga	tggaaaaaaa	ggtgaagacg	60
gaaaaggaaa	tggagaagat	ggaaaagaga	aaggagaaga	tgaaaaagag	gaagaagaca	120
gaaaagaaac	aggagt ttga	aaagagaatg	aagatggaaa	agagaaggga	gataaaaaag	180
aggggaaaga	tgtaa					195

Met Glu Met Arg Lys Glu Lys Met Gln Lys Arg Lys Lys Met Glu Lys  
1 5 10 15  
Lys Val Lys Thr Glu Lys Glu Met Glu Lys Met Glu Lys Arg Lys Glu  
20 25 30  
Lys Met Lys Lys Arg Lys Lys Thr Glu Lys Lys Gln Glu Leu Glu Lys  
35 40 45  
Arg Met Lys Met Glu Lys Arg Arg Glu Ile Lys Lys Arg Gly Lys Met  
50 55 60

## FIG. 9N

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atgagaaaagg agaagatgca aaagagaaaag aagatggaaa aaaagggtgaa gacggaaaaag 60  
 gaaatggaga agatggaaaa gagaaaaggag aagatgaaaa agaggaagaa gacagaaaaag 120  
 aaacaggagt tggaaaagag aatgaagatg gaaaagagaa gggagataaa aaagagggga 180  
 aagatgtaa 189

Met Arg Lys Glu Lys Met Gln Lys Arg Lys Lys Met Glu Lys Lys Val  
 1 5 10 15  
 Lys Thr Glu Lys Glu Met Glu Lys Met Glu Lys Arg Lys Glu Lys Met  
 20 25 30  
 Lys Lys Arg Lys Lys Thr Glu Lys Lys Gln Glu Leu Glu Lys Arg Met  
 35 40 45  
 Lys Met Glu Lys Arg Arg Glu Ile Lys Lys Arg Gly Lys Met  
 50 55 60

FIG.90

atgcaaaaaga gaaagaagat ggaaaaaaag gtgaagacgg aaaaggaaat ggagaagatg 60  
 gaaaagagaa aggagaagat gaaaaagagg aagaagacag aaaagaaaca ggagttggaa 120  
 aagagaatga agatggaaaa gagaaggag ataaaaaaga ggggaaagat gtaa 174

Met Gln Lys Arg Lys Lys Met Glu Lys Lys Val Lys Thr Glu Lys Glu  
 1 5 10 15  
 Met Glu Lys Met Glu Lys Arg Lys Glu Lys Met Lys Lys Arg Lys Lys  
 20 25 30  
 Thr Glu Lys Lys Gln Glu Leu Glu Lys Arg Met Lys Met Glu Lys Arg  
 35 40 45  
 Arg Glu Ile Lys Lys Arg Gly Lys Met  
 50 55

FIG.9P

atggaaaaaa aggtgaagac ggaaaaggaa atggagaaga tggaaaagag aaaggagaag 60  
 atgaaaaaga ggaagaagac agaaaagaaa caggagttgg aaaagagaat gaagatggaa 120  
 aagagaaggg agataaaaaa gaggggaaag atgtaa 156

Met Glu Lys Lys Val Lys Thr Glu Lys Glu Met Glu Lys Met Glu Lys  
 1 5 10 15  
 Arg Lys Glu Lys Met Lys Lys Arg Lys Lys Thr Glu Lys Lys Gln Glu  
 20 25 30  
 Leu Glu Lys Arg Met Lys Met Glu Lys Arg Arg Glu Ile Lys Lys Arg  
 35 40 45  
 Gly Lys Met  
 50

FIG.9Q

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atggagaaga tggaagagag aaaggagaag atgaaaaaga ggaagaagac agaaaagaaa 60  
 caggagtggg aaaagagaat gaagatggaa aagagaaggg agataaaaaa gaggggaaag 120  
 atgtaa 126

Met Glu Lys Met Glu Lys Arg Lys Glu Lys Met Lys Lys Arg Lys Lys  
 1 5 10 15  
 Thr Glu Lys Lys Gln Glu Leu Glu Lys Arg Met Lys Met Glu Lys Arg  
 20 25 30  
 Arg Glu Ile Lys Lys Arg Gly Lys Met  
 35 40

FIG.9R

atggaaaaga gaaaggagaa gatgaaaaag aggaagaaga cagaaaagaa acaggagtgg 60  
 gaaaagagaa tgaagatgga aaagagaagg gagataaaaa agaggggaaa gatgtaa 117

Met Glu Lys Arg Lys Glu Lys Met Lys Lys Arg Lys Lys Thr Glu Lys  
 1 5 10 15  
 Lys Gln Glu Leu Glu Lys Arg Met Lys Met Glu Lys Arg Arg Glu Ile  
 20 25 30  
 Lys Lys Arg Gly Lys Met  
 35

FIG.9S

atgaaaaaga ggaagaagac agaaaagaaa caggagtggg aaaagagaat gaagatggaa 60  
 aagagaaggg agataaaaaa gaggggaaag atgtaa 96

Met Lys Lys Arg Lys Lys Thr Glu Lys Lys Gln Glu Leu Glu Lys Arg  
 1 5 10 15  
 Met Lys Met Glu Lys Arg Arg Glu Ile Lys Lys Arg Gly Lys Met  
 20 25 30

FIG.9T

atgaagatgg aaaagagaag ggagataaaa aagaggggaa agatgtaa 48

Met Lys Met Glu Lys Arg Arg Glu Ile Lys Lys Arg Gly Lys Met  
 1 5 10 15

FIG.9U

atggaaaaga gaaggagat aaaaaagagg ggaaagatgt aa 42

Met Glu Lys Arg Arg Glu Ile Lys Lys Arg Gly Lys Met  
 1 5 10

FIG.9V

117  
 126  
 120  
 60  
 96  
 48  
 42

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atgaaaaaga gagagaagat ggaaaagaag atgaaggtgg aaatgaggaa gaagctggaa 60  
aagagaaaaga agatttaa 78

Met Lys Lys Arg Glu Lys Met Glu Lys Lys Met Lys Val Glu Met Arg  
1 5 10 15  
Lys Lys Leu Glu Lys Arg Lys Lys Ile  
20 25

FIG.9W

atggaaaaga agatgaaggt ggaaatgagg aagaagctgg aaaagagaaa gaagatttaa 60

Met Glu Lys Lys Met Lys Val Glu Met Arg Lys Lys Leu Glu Lys Arg  
1 5 10 15  
Lys Lys Ile

FIG.9X

atgaaggtgg aaatgaggaa gaagctggaa aagagaaaaga agatttaa 48

Met Lys Val Glu Met Arg Lys Lys Leu Glu Lys Arg Lys Lys Ile  
1 5 10 15

FIG.9Y

atgaggaaga agctggaaaa gagaaagaag atttaa 36

Met Arg Lys Lys Leu Glu Lys Arg Lys Lys Ile  
1 5 10

FIG.9Z

atgagatcaa agaagatgat ggaaaaaaag aggagccaca gagtattgtt taaaactgcc 60  
ctatgtagtt tcataatttg gtaa 84

Met Arg Ser Lys Lys Met Met Glu Lys Lys Arg Ser His Arg Val Leu  
1 5 10 15  
Phe Lys Thr Ala Leu Cys Ser Phe Ile Ile Trp  
20 25

FIG.9AA

atgatggaaa aaaagaggag ccacagagta ttgtttaaaa ctgccctatg tagtttcata 60  
atttggtaa 69

Met Met Glu Lys Lys Arg Ser His Arg Val Leu Phe Lys Thr Ala Leu  
1 5 10 15  
Cys Ser Phe Ile Ile Trp  
20

FIG.9AB

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atggaaaaaa agaggagcca cagagtattg tttaaaactg ccctatgtag tttcataatt 60  
 tggtaa 66

Met Glu Lys Lys Arg Ser His Arg Val Leu Phe Lys Thr Ala Leu Cys  
 1 5 10 15  
 Ser Phe Ile Ile Trp  
 20

## FIG.9AC

atgtaccttc atgttgtaaa gttaatagag ataaatattt ttatcaaaaa ttttataaac 60  
 acagccttc tttag 75

Met Tyr Leu His Val Val Lys Leu Ile Glu Ile Asn Ile Phe Ile Lys  
 1 5 10 15  
 Asn Phe Ile Asn Thr Ala Phe Leu  
 20

## FIG.9AD

atgaaacatt tatctataaa ttttgtgatt atagtagtgg aatacataga aaaaaatatg 60  
 ctttcaactt tgtga 75

Met Lys His Leu Ser Ile Asn Phe Val Ile Ile Val Val Glu Tyr Ile  
 1 5 10 15  
 Glu Lys Asn Met Leu Ser Thr Leu  
 20

## FIG.9AE

atgctttcaa ctttgtga 18

Met Leu Ser Thr Leu  
 1 5

## FIG.9AF

atgtcaaadc tttga 15

Met Ser Asn Leu  
 1

## FIG.9AG

atgttaagag ttaaacttat ctttcccaaa tataacttta ttattagctt gggaaaaatg 60  
 aaattgtatt cccattttta a 81

Met Leu Arg Val Lys Leu Ile Phe Pro Lys Tyr Asn Phe Ile Ile Ser  
 1 5 10 15  
 Leu Gly Lys Met Lys Leu Tyr Ser His Phe  
 20 25

## FIG.9AH

FIG. 9A-9H

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atgaaattgt attcccatTT ttaa

24

Met Lys Leu Tyr Ser His Phe

1

5

## FIG.9AI

atgtttatTTT cagaagggca gttttga

27

Met Phe Ile Ser Glu Gly Gln Phe

1

5

## FIG.9AJ

atgattgtgt tttgttatat cttcaaaaat atagctagtG aaatattgtg cttaatTTTT  
ttctattgtg ttattcatga aaatatTTTaa

60

90

Met Ile Val Phe Cys Tyr Ile Phe Lys Asn Ile Ala Ser Glu Ile Leu

1

5

10

15

Cys Leu Ile Phe Phe Tyr Cys Val Ile His Glu Asn Ile

20

25

## FIG.9AK

atgaaaatat ttaatatTTca ctga

24

Met Lys Ile Phe Asn Ile His

1

5

## FIG.9AL

FIG. 9A



# Urbane

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atgtgctttc ctccctctcc cctgcccacc tcaagtttaa taaataaggt tgtacttttc 60  
ttactataa 69

Met Cys Phe Pro Pro Ser Pro Leu Pro Thr Ser Ser Leu Ile Asn Lys  
1 5 10 15  
Val Val Leu Phe Leu Leu  
20

## FIG.10D

atgtctgtaa ctgctgtgca ctgctgtaaa cttgttagag aaaaaataa cctgcatgtg 60  
ggctcctcag ttattgagtt tttgtga 87

Met Ser Val Thr Ala Val His Cys Cys Lys Leu Val Arg Glu Lys Asn  
1 5 10 15  
Asn Leu His Val Gly Ser Ser Val Ile Glu Phe Leu  
20 25

## FIG.10E

atgtgggctc ctcaattatt gagtttttgt gatcctatct cagtctgggg gggaacattc 60  
tcaagaggtg aaatacaaga aagccttttt ttcttgatc ttttcccgag attcaaattc 120  
ccgatttccc atttgggggc aagttttttt cttcaccttc aatatgagaa ttcagcgaac 180  
ttgaaagaaa aatcatctgt gagttccttc aggttctcac tcatagtcac gatccttcag 240  
agggaatatg cactggcgag tttaaagtaa 270

Met Trp Ala Pro Gln Leu Leu Ser Phe Cys Asp Pro Ile Ser Val Trp  
1 5 10 15  
Gly Gly Thr Phe Ser Arg Gly Glu Ile Gln Glu Ser Leu Phe Phe Leu  
20 25 30  
Asp Leu Phe Pro Arg Phe Lys Ser Pro Ile Ser His Leu Gly Ala Ser  
35 40 45  
Phe Phe Leu His Leu Gln Tyr Glu Asn Ser Ala Asn Leu Lys Glu Lys  
50 55 60  
Ser Ser Val Ser Ser Phe Arg Phe Ser Leu Ile Val Met Ile Leu Gln  
65 70 75 80  
Arg Glu Tyr Ala Leu Ala Ser Leu Lys  
85

## FIG.10F

atgagaattc agcgaacttg a 21

Met Arg Ile Gln Arg Thr  
1 5

## FIG.10G

0492261-030301

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atgacccctc agaggggaata tgcactggcg agtttaaagt aa

42

Met Ile Leu Gln Arg Glu Tyr Ala Leu Ala Ser Leu Lys  
1 5 10

FIG.10H

atgcactggc gagtttaa

18

Met His Trp Arg Val  
1 5

FIG.10I

atgatatttg atgggtcccaa agtacggcag ctgcaaaaag tagtggaagg aaattgtcta  
cgtgtcttgg aaaattagt taggaatttg gatgggtaa

60

99

Met Ile Phe Asp Gly Pro Lys Val Arg Gln Leu Gln Lys Val Val Glu  
1 5 10 15  
Gly Asn Cys Leu Arg Val Leu Glu Lys Leu Val Arg Asn Leu Asp Gly  
20 25 30

FIG.10J

atgggtcccaa agtacggcag ctgcaaaaag tag

33

Met Val Pro Lys Tyr Gly Ser Cys Lys Lys  
1 5 10

FIG.10K

atgggtaaaa ggtacccttg ccttactcca tcttattttc ttagccccct ttga

54

Met Gly Lys Arg Tyr Pro Cys Leu Thr Pro Ser Tyr Phe Leu Ser Pro  
1 5 10 15  
Leu

FIG.10L

atgaaaaatt actaa

15

Met Lys Asn Tyr  
1

FIG.10M

FIG. 10H-10M

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atgaaactgt gtgtacgtgt ctgtgcgtgc aacataaaaa tacagtag 48

Met Lys Leu Cys Val Arg Val Cys Ala Cys Asn Ile Lys Ile Gln  
1 5 10 15

FIG.10N

atgtggtatt aa 12

Met Trp Tyr  
1

FIG.100

FIG. 100

atggtttatt	accagaact	ctttgtctgg	gtcagtcaag	aaccatttcc	aaacaaggac	60
atggagggaa	ggcttcctaa	gggaagactt	cctgtcccaa	aggaagtga	ccgcaagaag	120
aacgatgaga	caaacgctgc	ctccctgact	ccactgggca	gcagtgaact	ccgctcccca	180
agaatcagtt	acctccactt	tttttaa				207

Met Val Tyr Tyr Pro Glu Leu Phe Val Trp Val Ser Gln Glu Pro Phe  
1 5 10 15  
Pro Asn Lys Asp Met Glu Gly Arg Leu Pro Lys Gly Arg Leu Pro Val  
20 25 30  
Pro Lys Glu Val Asn Arg Lys Lys Asn Asp Glu Thr Asn Ala Ala Ser  
35 40 45  
Leu Thr Pro Leu Gly Ser Ser Glu Leu Arg Ser Pro Arg Ile Ser Tyr  
50 55 60  
Leu His Phe Phe  
65

**FIG. 11A**

```
atggagggaa ggcttcctaa gggaagactt cctgtcccaa aggaagtga ccgcaagaag    60
aacgatgaga caaacgctgc ctccctgact ccactgggca gcagtgaact ccgctcccca    120
agaatcagtt acctccactt tttttaaa                                147
```

Met	Glu	Gly	Arg	Leu	Pro	Lys	Gly	Arg	Leu	Pro	Val	Pro	Lys	Glu	Val
1				5					10					15	
Asn	Arg	Lys	Lys	Asn	Asp	Glu	Thr	Asn	Ala	Ala	Ser	Leu	Thr	Pro	Leu
			20					25					30		
Gly	Ser	Ser	Glu	Leu	Arg	Ser	Pro	Arg	Ile	Ser	Tyr	Leu	His	Phe	Phe
		35					40					45			

**FIG. 11B**

atgaagacaaa cgctgcctcc ctga 24

Met Arg Gln Thr Leu Pro Pro  
1 5

**FIG. 11C**

atggtgtatg ggtattga 18

Met Val Tyr Gly Tyr  
1 5

FIG. 11D

[illegible]

63/92

atgtctttcca caactcaaac tcccaccgcg ctacacacaac cggctccactc ctgccttttc 60  
actcacacag ctcccgactg cttcttgcag aggctgagag tccccccccc accttttttt 120  
tcatttagat gtaacaaacc tagtagttta tgttcatcaa ttgtctgtat atctctatat 180  
tttatccatg tactcttttg a 201

Met Ser Ser Thr Thr Gln Thr Pro Thr Ala Leu Thr Gln Pro Val His  
1 5 10 15  
Ser Cys Leu Phe Thr His Thr Ala Pro Asp Cys Phe Leu Gln Arg Leu  
20 25 30  
Arg Val Pro Pro Pro Pro Phe Phe Ser Phe Arg Cys Asn Lys Pro Ser  
35 40 45  
Ser Leu Cys Ser Ser Ile Val Cys Ile Ser Leu Tyr Phe Ile His Val  
50 55 60  
Leu Phe  
65

FIG. 11J

atgttcatca attgtctgta tatctctata ttttatccat gtactctttt gatgtataga 60  
agtagtttga aactcattgt ttccttgtag taa 93

Met Phe Ile Asn Cys Leu Tyr Ile Ser Ile Phe Tyr Pro Cys Thr Leu  
1 5 10 15  
Leu Met Tyr Arg Ser Ser Leu Lys Leu Ile Val Ser Leu Trp  
20 25 30

FIG. 11K

atgtactctt ttgatgtata g 21

Met Tyr Ser Phe Asp Val  
1 5

FIG. 11L

atgtatagaa gtagtttgaa actcattggt tccttgtagg aa 42

Met Tyr Arg Ser Ser Leu Lys Leu Ile Val Ser Leu Trp  
1 5 10

FIG. 11M

atgctgccac aggacctgag aactga 27

Met Leu Pro Gln Asp Leu Arg His  
1 5

FIG. 11N

FIG. 11J-11N

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atgaatggtg ctatitttggga ctttcaacat gctccttggc gaggtagctc tgatggagtt 60  
atitttttatt tccatgttct aagaaggtgt tggtactctg tttcccttga atgttggtct 120  
ctagactgga ttgacttgtt ttccttgtgt cttcagtggtg gctttcttcc tcagtgttgt 180  
aggttgagcg aatgctacca gagtgtgaga gaccattgtc tcgttggctg gcgctcacgg 240  
acatgcagtc acggtagcgg gagcaatcac aaaactgtaa tttacttacc aaatctcttc 300  
ctttccgtag cctcgcctgc ctga 324

Met Asn Gly Ala Ile Leu Asp Phe Gln His Ala Pro Trp Arg Gly Ser  
1 5 10 15  
Ser Asp Gly Val Ile Phe Tyr Phe His Val Leu Arg Arg Cys Trp Tyr  
20 25 30  
Ser Val Ser Leu Glu Cys Cys Ser Leu Asp Trp Ile Asp Leu Phe Ser  
35 40 45  
Leu Cys Leu Gln Cys Gly Phe Leu Pro Gln Cys Cys Arg Leu Ser Glu  
50 55 60  
Cys Tyr Gln Ser Val Arg Asp His Cys Leu Val Gly Trp Arg Ser Arg  
65 70 75 80  
Thr Cys Ser His Gly Ser Gly Ser Asn His Lys Thr Val Ile Tyr Leu  
85 90 95  
Pro Asn Leu Phe Leu Ser Val Ala Ser Pro Ala  
100 105

FIG.11O

atggtgctat tttggacttt caacatgctc cttggcgagg tagctctgat ggagttattt 60  
tttattttcca tgttctaa 78

Met Val Leu Phe Trp Thr Phe Asn Met Leu Leu Gly Glu Val Ala Leu  
1 5 10 15  
Met Glu Leu Phe Phe Ile Ser Met Phe  
20 25

FIG.11P

atgctccttg gcgaggtagc tctgatggag ttatttttta tttccatggt ctaa 54

Met Leu Leu Gly Glu Val Ala Leu Met Glu Leu Phe Phe Ile Ser Met  
1 5 10 15  
Phe

FIG.11Q

atggagttat tttttatttc catgttctaa 30

Met Glu Leu Phe Phe Ile Ser Met Phe  
1 5

FIG.11R



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atgttggttct ctagactgga ttga

24

Met Leu Phe Ser Arg Leu Asp

1

5

## FIG.11S

atgctaccag agtgtgagag accattgtct cgttggctgg cgctcacgga catgcagtca  
cggtag

60

66

Met Leu Pro Glu Cys Glu Arg Pro Leu Ser Arg Trp Leu Ala Leu Thr

1

5

10

15

Asp Met Gln Ser Arg

20

## FIG.11T

atgcagtcac ggtag

15

Met Gln Ser Arg

1

## FIG.11U

atgaaaatga caccttttcc aaatattaaa ttggaaaaca aggtctacaa aatcatgata  
cttttttaa

60

69

Met Lys Met Thr Pro Phe Pro Asn Ile Lys Leu Glu Asn Lys Val Tyr

1

5

10

15

Lys Ile Met Ile Leu Phe

20

## FIG.11V

atgacacctt ttccaaatat taaattggaa aacaaggctc acaaaatcat gatacttttt  
taa

60

63

Met Thr Pro Phe Pro Asn Ile Lys Leu Glu Asn Lys Val Tyr Lys Ile

1

5

10

15

Met Ile Leu Phe

20

## FIG.11W

atgatacttt tttaa

15

Met Ile Leu Phe

1

## FIG.11X

10001-136

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atggataaac aaaaataa

18

Met Asp Lys Gln Lys

1 5

## FIG.11Y

atggaatggt gttgtggttag ccagtctgaa agcccacctt aa

42

Met Glu Cys Cys Cys Val Ser Gln Ser Glu Ser Pro Pro

1 5 10

## FIG.11Z

atgttggtgt gttag

15

Met Leu Leu Cys

1

## FIG.11AA

atgacgcatg cactgcactt cttcgttttc ttcttgctcc cccattggcc tgagtttctt  
gtgcattact cctctccctc cttcgttaga ataggtgtat cagctgtgta a

60  
111

Met Thr His Ala Leu His Phe Phe Val Phe Phe Leu Leu Pro His Trp

1 5 10 15

Pro Glu Phe Leu Val His Tyr Ser Ser Pro Ser Phe Val Arg Ile Gly

20 25 30

Val Ser Ala Val

35

## FIG.11AB

atgcactgca cttcttcgtt ttcttcttgc tccccattg gcctgagttt cttgtgcatt  
actcctctcc ctccttcgtt agaatag

60  
87

Met His Cys Thr Ser Ser Phe Ser Ser Cys Ser Pro Ile Gly Leu Ser

1 5 10 15

Phe Leu Cys Ile Thr Pro Leu Pro Pro Ser Leu Glu

20 25

## FIG.11AC

atgcaggctt ttgtaacagt gtga

24

Met Gln Ala Phe Val Thr Val

1 5

## FIG.11AD

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atgcactcat ga

12

Met His Ser

1

FIG.11AE

atgacaagta cccaatgtat ttagctatt ttagtagtat ttgttcaata a

51

Met Thr Ser Thr Gln Cys Ile Leu Ala Ile Leu Val Val Phe Val Gln

1

5

10

15

FIG.11AF

atgtatttta gctatttttag tagtattttgt tcaataaata cgcaagctgt aaggtaa

57

Met Tyr Phe Ser Tyr Phe Ser Ser Ile Cys Ser Ile Asn Thr Gln Ala

1

5

10

15

Val Arg

FIG.11AG

FIG.11AE

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atggaggagc tactcctctg ggaggacaga aattag

36

Met Glu Glu Leu Leu Trp Glu Asp Arg Asn  
 1 5 10

## FIG.12A

atgaaaccat tgagtttgtg cttgtatca gaaagcaaag gagaatga

48

Met Lys Pro Leu Ser Leu Cys Leu Val Ser Glu Ser Lys Gly Glu  
 1 5 10 15

## FIG.12B

atgaaaaagc acagctaa

18

Met Lys Lys His Ser  
 1 5

## FIG.12C

atgggtatcc cgaggactaa tgagtttgt gggaagatca taagtaatga agttcttcac  
 tga

60

63

Met Gly Ile Pro Arg Thr Asn Glu Phe Cys Gly Lys Ile Ile Ser Asn  
 1 5 10 15  
 Glu Val Leu His  
 20

## FIG.12D

atgagttttg tggaagatc ataa

24

Met Ser Phe Val Gly Arg Ser  
 1 5

## FIG.12E

atgaagttct tcaactgattt gaagttgcgg ggacacaaaa attgtcattg a

51

Met Lys Phe Phe Thr Asp Leu Lys Leu Arg Gly His Lys Asn Cys His  
 1 5 10 15

## FIG.12F

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atggttatgc	tctttccac	cgtctttgct	tcagtttcaa	acttggatct	ccggtatgga	60
ggggactatg	attcttttgc	agatgttgta	caaaaattct	ttgaatcact	gtttgcttgt	120
aatatatgcc	catatgttgt	attagatgga	ggatgtgaca	tttcagataa	aaagcttaca	180
actttaaagg	atagagctag	agagaagatc	cagatggccc	attccctttc	tgttggtggg	240
agtgggtatg	tatgtccctt	actcatccgg	gaagtattca	tacaggtttt	gatcaagctg	300
cgggtgtgtt	ttgtccagtg	cttttcagaa	gcagatcggg	acattatgac	acttgctaac	360
cattggaatt	gccctgtgtt	atcatcagat	agtgactttt	gcatttttga	cctgaaaact	420
gggttttgcc	cattgaatag	ctttcagtg	agaaatatga	acactattaa	gggcacacaa	480
aactatatcc	ctgccaaatg	cttttcctt	gatgcattct	gccatcactt	cagcaatatg	540
aataaagctc	tactacctct	ctttgcggtg	ctatgtggaa	atgaccatgt	taatctaccc	600
atcatggaga	cattcttaag	taaagcgcgt	cttcctcttg	gagctaccag	ttctaaaggg	660
aggagacacc	accgaatcct	gggacttctg	aattggttgt	ctcattttgc	caaccctacc	720
gaagcactag	ataatgttct	gaaatacctc	ccaaaaaagg	atcgagaaaa	tgtaaggaa	780
cttctctgct	gttccatgga	agaataccaa	cagtcccagg	tgaagctaca	ggacttcttc	840
cagtgtggta	cttatgtctg	tccagatgcc	ttgaatcttg	gtttaccaga	atgggtatta	900
gtggcttttag	ctaaaggcca	gctatctcct	ttcatcagtg	atgctttggt	cctaagacgg	960
accattcttc	ccacacaggt	ggaaaacatg	cagcaaccaa	atgcccacag	aatatctcag	1020
cccacagggc	aatcatctta	tgggcttctt	ttaaatgcct	caccacatct	ggacaagaca	1080
tcctggaatg	cattgcctcc	tcagcctcta	gctttcagtg	aagtggaaag	gattaataaa	1140
aatatcagaa	cctcaatcat	tgatgcagta	gaactggcca	aggatcattc	tgacttaagc	1200
agattgactg	agctctcctt	gaggaggcgg	cagatgcttc	tgtagaaac	cctgaaggtg	1260
aaacagacca	ttctggagcc	aatccctact	tcactgaagt	tgcccattgc	tgtcagttgc	1320
tactggttgc	agcacaccga	gaccaaagca	aagctacatc	atctacaatc	cttactgctc	1380
acaatgctag	tggggccctt	gattgccata	atcaacagcc	ctggaaatgt	ggaccctgta	1440
cccaggcagg	ctcagtgctt	tgctcctcgc	tag			1473

Met	Val	Met	Leu	Phe	Ser	Thr	Val	Phe	Ala	Ser	Val	Ser	Asn	Leu	Asp
1			5					10						15	
Leu	Arg	Tyr	Gly	Gly	Asp	Tyr	Asp	Ser	Phe	Ala	Asp	Val	Val	Gln	Lys
			20					25					30		
Phe	Phe	Glu	Ser	Leu	Phe	Ala	Cys	Asn	Ile	Cys	Pro	Tyr	Val	Val	Leu
			35				40					45			
Asp	Gly	Gly	Cys	Asp	Ile	Ser	Asp	Lys	Lys	Leu	Thr	Thr	Leu	Lys	Asp
	50					55					60				
Arg	Ala	Arg	Glu	Lys	Ile	Gln	Met	Ala	His	Ser	Leu	Ser	Val	Gly	Gly
65					70				75					80	
Ser	Gly	Tyr	Val	Cys	Pro	Leu	Leu	Ile	Arg	Glu	Val	Phe	Ile	Gln	Val
				85				90						95	
Leu	Ile	Lys	Leu	Arg	Val	Cys	Phe	Val	Gln	Cys	Phe	Ser	Glu	Ala	Asp
			100					105					110		
Arg	Asp	Ile	Met	Thr	Leu	Ala	Asn	His	Trp	Asn	Cys	Pro	Val	Leu	Ser
		115					120					125			
Ser	Asp	Ser	Asp	Phe	Cys	Ile	Phe	Asp	Leu	Lys	Thr	Gly	Phe	Cys	Pro
		130				135					140				
Leu	Asn	Ser	Phe	Gln	Trp	Arg	Asn	Met	Asn	Thr	Ile	Lys	Gly	Thr	Gln
145					150					155					160

FIG.12G

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Asn	Tyr	Ile	Pro	Ala	Lys	Cys	Phe	Ser	Leu	Asp	Ala	Phe	Cys	His	His
				165					170					175	
Phe	Ser	Asn	Met	Asn	Lys	Ala	Leu	Leu	Pro	Leu	Phe	Ala	Val	Leu	Cys
				180				185					190		
Gly	Asn	Asp	His	Val	Asn	Leu	Pro	Ile	Met	Glu	Thr	Phe	Leu	Ser	Lys
		195					200					205			
Ala	Arg	Leu	Pro	Leu	Gly	Ala	Thr	Ser	Ser	Lys	Gly	Arg	Arg	His	His
	210					215					220				
Arg	Ile	Leu	Gly	Leu	Leu	Asn	Trp	Leu	Ser	His	Phe	Ala	Asn	Pro	Thr
225					230					235					240
Glu	Ala	Leu	Asp	Asn	Val	Leu	Lys	Tyr	Leu	Pro	Lys	Lys	Asp	Arg	Glu
				245					250				255		
Asn	Val	Lys	Glu	Leu	Leu	Cys	Cys	Ser	Met	Glu	Glu	Tyr	Gln	Gln	Ser
			260					265					270		
Gln	Val	Lys	Leu	Gln	Asp	Phe	Phe	Gln	Cys	Gly	Thr	Tyr	Val	Cys	Pro
		275					280					285			
Asp	Ala	Leu	Asn	Leu	Gly	Leu	Pro	Glu	Trp	Val	Leu	Val	Ala	Leu	Ala
	290					295					300				
Lys	Gly	Gln	Leu	Ser	Pro	Phe	Ile	Ser	Asp	Ala	Leu	Val	Leu	Arg	Arg
305					310					315					320
Thr	Ile	Leu	Pro	Thr	Gln	Val	Glu	Asn	Met	Gln	Gln	Pro	Asn	Ala	His
				325					330					335	
Arg	Ile	Ser	Gln	Pro	Ile	Arg	Gln	Ile	Ile	Tyr	Gly	Leu	Leu	Leu	Asn
			340					345					350		
Ala	Ser	Pro	His	Leu	Asp	Lys	Thr	Ser	Trp	Asn	Ala	Leu	Pro	Pro	Gln
		355					360					365			
Pro	Leu	Ala	Phe	Ser	Glu	Val	Glu	Arg	Ile	Asn	Lys	Asn	Ile	Arg	Thr
	370					375					380				
Ser	Ile	Ile	Asp	Ala	Val	Glu	Leu	Ala	Lys	Asp	His	Ser	Asp	Leu	Ser
385				390						395					400
Arg	Leu	Thr	Glu	Leu	Ser	Leu	Arg	Arg	Arg	Gln	Met	Leu	Leu	Leu	Glu
				405					410					415	
Thr	Leu	Lys	Val	Lys	Gln	Thr	Ile	Leu	Glu	Pro	Ile	Pro	Thr	Ser	Leu
			420					425					430		
Lys	Leu	Pro	Ile	Ala	Val	Ser	Cys	Tyr	Trp	Leu	Gln	His	Thr	Glu	Thr
		435					440					445			
Lys	Ala	Lys	Leu	His	His	Leu	Gln	Ser	Leu	Leu	Leu	Thr	Met	Leu	Val
	450					455					460				
Gly	Pro	Leu	Ile	Ala	Ile	Ile	Asn	Ser	Pro	Gly	Asn	Val	Asp	Pro	Val
465					470					475					480
Pro	Arg	Gln	Ala	Gln	Cys	Leu	Ala	Pro	Arg						
				485					490						

FIG.12G-1

FIG. 12G-1

<210> 374  
 <211> 1467  
 <212> DNA  
 <213> Homo sapiens

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<400> 374  
 atgctctttt ccaccgtctt tgcttcagtt tcaaacttgg atctccggtg tggaggggac 60  
 tatgattctt ttgcagatgt tgtacaaaaa ttctttgaat cactgtttgc ttgtaataata 120  
 tgcccatatg ttgtattaga tggaggatgt gacatttcag ataaaaagct tacaacttta 180  
 aagagatagc cttagagaga gatccagatg gccattcccc tttctgttgg tgggagtggtg 240  
 tatgtatgtc ctttactcat ccgggaagta ttcatcacgg ttttgatcaa gctgcgggtg 300  
 tgttttgtcc agtgcttttc agaagcagat cgggacatta tgacacttgc taaccattgg 360  
 aattgccctg tgttatcatc agatagtgc ttttgcattt ttgacctgaa aactgggttt 420  
 tgcccatgga atagctttca gtggagaaat atgaacacta ttaagggcac acaaaactat 480  
 atccctgcca aatgcttttc cttgatgca ttctgccatc acttcagcaa tatgaataaa 540  
 gctctactac ctctctttgc ggtgctatgt ggaaatgacc atgttaatct acccatcatg 600  
 gagacattct taagtaaagc gcgtcttcct ctggagcta ccagttctaa agggaggaga 660  
 caccaccgaa tcctgggact tctgaattgg ttgtctcatt ttgccaacc taccgaagca 720  
 ctagataatg ttctgaaata cctcccaaaa aaggatcgag aaaatgttaa ggaacttctc 780  
 tgctgttcca tggaagaata ccaacagtcc caggtgaagc tacaggactt cttccagtgt 840  
 ggtacttatg tctgtccaga tgccttgaat cttggtttac cagaatgggt attagtggct 900  
 ttagctaaag gccagctatc tcctttcatc agtgatgctt tggctcctaag acggaccatt 960  
 cttccacac aggtggaata catgcagcaa ccaatggccc acagaatata tcagcccatc 1020  
 aggcaaatca tctatgggct tcttttaaat gcctcaccac atctggacaa gacatcctgg 1080  
 aatgcattgc ctcctcagcc tctagctttc agtgaagtgg aaaggattaa taaaaatatc 1140  
 agaacctcaa tcattgatgc agtagaactg gccaggatc attctgactt aagcagattg 1200  
 actgagctct ccttgaggag gcggcagatg cttctgttag aaaccctgaa ggtgaaacag 1260  
 accattctgg agccaatccc tacttcaactg aagttgccc ttgctgtcag ttgctactgg 1320  
 ttgcagcaca ccgagaccaa agcaaagcta catcatctac aatccttact gctcacatg 1380  
 ctagtggggc ccttgattgc cataatcaac agccctggaa atgtggaccc tgtacccagg 1440  
 caggctcagt gtcttgctcc tcgctag 1467

<210> 375  
 <211> 488  
 <212> PRT  
 <213> Homo sapiens

<400> 375  
 Met Leu Phe Ser Thr Val Phe Ala Ser Val Ser Asn Leu Asp Leu Arg  
 1 5 10 15  
 Tyr Gly Gly Asp Tyr Asp Ser Phe Ala Asp Val Val Gln Lys Phe Phe  
 20 25 30  
 Glu Ser Leu Phe Ala Cys Asn Ile Cys Pro Tyr Val Val Leu Asp Gly  
 35 40 45  
 Gly Cys Asp Ile Ser Asp Lys Lys Leu Thr Thr Leu Lys Asp Arg Ala  
 50 55 60  
 Arg Glu Lys Ile Gln Met Ala His Ser Leu Ser Val Gly Gly Ser Gly  
 65 70 75 80  
 Tyr Val Cys Pro Leu Leu Ile Arg Glu Val Phe Ile Gln Val Leu Ile  
 85 90 95  
 Lys Leu Arg Val Cys Phe Val Gln Cys Phe Ser Glu Ala Asp Arg Asp  
 100 105 110  
 Ile Met Thr Leu Ala Asn His Trp Asn Cys Pro Val Leu Ser Ser Asp  
 115 120 125  
 Ser Asp Phe Cys Ile Phe Asp Leu Lys Thr Gly Phe Cys Pro Leu Asn  
 130 135 140  
 Ser Phe Gln Trp Arg Asn Met Asn Thr Ile Lys Gly Thr Gln Asn Tyr  
 145 150 155 160  
 Ile Pro Ala Lys Cys Phe Ser Leu Asp Ala Phe Cys His His Phe Ser  
 165 170 175

FIG. 12H

09232660

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Asn	Met	Asn	Lys	Ala	Leu	Leu	Pro	Leu	Phe	Ala	Val	Leu	Cys	Gly	Asn
			180					185					190		
Asp	His	Val	Asn	Leu	Pro	Ile	Met	Glu	Thr	Phe	Leu	Ser	Lys	Ala	Arg
		195					200					205			
Leu	Pro	Leu	Gly	Ala	Thr	Ser	Ser	Lys	Gly	Arg	Arg	His	His	Arg	Ile
	210					215					220				
Leu	Gly	Leu	Leu	Asn	Trp	Leu	Ser	His	Phe	Ala	Asn	Pro	Thr	Glu	Ala
225					230					235					240
Leu	Asp	Asn	Val	Leu	Lys	Tyr	Leu	Pro	Lys	Lys	Asp	Arg	Glu	Asn	Val
			245						250					255	
Lys	Glu	Leu	Leu	Cys	Cys	Ser	Met	Glu	Glu	Tyr	Gln	Gln	Ser	Gln	Val
			260					265					270		
Lys	Leu	Gln	Asp	Phe	Phe	Gln	Cys	Gly	Thr	Tyr	Val	Cys	Pro	Asp	Ala
		275					280					285			
Leu	Asn	Leu	Gly	Leu	Pro	Glu	Trp	Val	Leu	Val	Ala	Leu	Ala	Lys	Gly
	290					295					300				
Gln	Leu	Ser	Pro	Phe	Ile	Ser	Asp	Ala	Leu	Val	Leu	Arg	Arg	Thr	Ile
305					310					315					320
Leu	Pro	Thr	Gln	Val	Glu	Asn	Met	Gln	Gln	Pro	Asn	Ala	His	Arg	Ile
			325						330					335	
Ser	Gln	Pro	Ile	Arg	Gln	Ile	Ile	Tyr	Gly	Leu	Leu	Leu	Asn	Ala	Ser
			340					345					350		
Pro	His	Leu	Asp	Lys	Thr	Ser	Trp	Asn	Ala	Leu	Pro	Pro	Gln	Pro	Leu
		355					360					365			
Ala	Phe	Ser	Glu	Val	Glu	Arg	Ile	Asn	Lys	Asn	Ile	Arg	Thr	Ser	Ile
	370					375					380				
Ile	Asp	Ala	Val	Glu	Leu	Ala	Lys	Asp	His	Ser	Asp	Leu	Ser	Arg	Leu
385					390					395					400
Thr	Glu	Leu	Ser	Leu	Arg	Arg	Arg	Gln	Met	Leu	Leu	Leu	Glu	Thr	Leu
			405						410					415	
Lys	Val	Lys	Gln	Thr	Ile	Leu	Glu	Pro	Ile	Pro	Thr	Ser	Leu	Lys	Leu
			420					425					430		
Pro	Ile	Ala	Val	Ser	Cys	Tyr	Trp	Leu	Gln	His	Thr	Glu	Thr	Lys	Ala
		435					440					445			
Lys	Leu	His	His	Leu	Gln	Ser	Leu	Leu	Leu	Thr	Met	Leu	Val	Gly	Pro
	450					455					460				
Leu	Ile	Ala	Ile	Ile	Asn	Ser	Pro	Gly	Asn	Val	Asp	Pro	Val	Pro	Arg
465					470					475					480
Gln	Ala	Gln	Cys	Leu	Ala	Pro	Arg								
				485											

FIG.12H-1

092261.00301



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atggagggga ctatgattct ttgcagatg ttgtacaaaa attctttgaa tcactgtttg 60  
 cttgtaatat atgcccatat gttgtattag 90

Met Glu Gly Thr Met Ile Leu Leu Gln Met Leu Tyr Lys Asn Ser Leu  
 1 5 10 15  
 Asn His Cys Leu Leu Val Ile Tyr Ala His Met Leu Tyr  
 20 25

FIG.12I

atgattcttt tgcagatggt gtacaaaaat tctttgaatc actgtttgct tgtaatatat 60  
 gcccatatgt tgtattag 78

Met Ile Leu Leu Gln Met Leu Tyr Lys Asn Ser Leu Asn His Cys Leu  
 1 5 10 15  
 Leu Val Ile Tyr Ala His Met Leu Tyr  
 20 25

FIG.12J

atgttgtaga aaaattcttt gaatcactgt ttgcttgtaa tatatgccca tatgttgtag 60  
 tag 63

Met Leu Tyr Lys Asn Ser Leu Asn His Cys Leu Leu Val Ile Tyr Ala  
 1 5 10 15  
 His Met Leu Tyr  
 20

FIG.12K

atgcccatat gttgtattag atggaggatg tga 33

Met Pro Ile Cys Cys Ile Arg Trp Arg Met  
 1 5 10

FIG.12L

atgttgtagt ag 12

Met Leu Tyr  
 1

FIG.12M

atggaggatg tgacatttca gataaaaagc ttacaacttt aa 42

Met Glu Asp Val Thr Phe Gln Ile Lys Ser Leu Gln Leu  
 1 5 10

FIG.12N

10001-136

atggccatt	ccctttctgt	tgggtggag	gggtatgtat	gtcccttact	catccgggaa	60
gtattcatac	aggttttgat	caagctgcgg	gtgtgttttg	tccagtgcct	ttcagaagca	120
gatcgggaca	ttatgacact	tgctaaccat	tggaattgcc	ctgtgttatc	atcagatagt	180
gacttttgca	tttttgacct	gaaaactggg	ttttgcccat	tgaatagctt	tcagtggaga	240
aatatgaaca	ctattaagg	cacacaaaac	tatatccctg	ccaaatgcct	ttcccttgat	300
gcattctgcc	atcacttcag	caatatgaat	aaagctctac	tacctctctt	tgcggtgcta	360
tgtggaaatg	accatgttaa	tctacccatc	atggagacat	tcttaagtaa	agcgcgtctt	420
cctcttgagg	ctaccagttc	taaagggagg	agacaccacc	gaatcctggg	acttctgaat	480
tggttgtctc	attttgccaa	ccctaccgaa	gcactagata	atgttctgaa	atacctcca	540
aaaaaggatc	gagaaaatgt	taaggaactt	ctctgctgtt	ccatggaaga	ataccaacag	600
tcccagggtga	agctacagga	cttcttccag	tgtggtactt	atgtctgtcc	agatgccttg	660
aatcttgggt	taccagaatg	ggtattagt	gctttagcta	aaggccagct	atctcctttc	720
atcagtgatg	ctttggtcct	aagacggacc	attcttcca	cacagggtga	aaacatgcag	780
caaccaaattg	cccacagaat	atctcagccc	atcaggcaaa	tcatctatgg	gcttctttta	840
aatgcctcac	cacatctgga	caagacatcc	tggaatgcat	tgccctctca	gcctctagct	900
ttcagtgaag	tggaaaggat	taataaaaat	atcagaacct	caatcattga	tgcagtagaa	960
ctggccaagg	atcattctga	cttaagcaga	ttgactgagc	tctccttgag	gaggcggcag	1020
atgcttctgt	tagaaaccct	gaagggtgaa	cagaccattc	tggagccaat	ccctacttca	1080
ctgaagttgc	ccattgctgt	cagttgctac	tggttgcagc	acaccgagac	caaagcaaag	1140
ctacatcatc	tacaatcctt	actgctcaca	atgctagtgg	ggcccttgat	tgccataatc	1200
aacagccctg	gaaatgtgga	ccctgtaccc	aggcaggctc	agtgtcttgc	tcctcgctag	1260

Met 1	Ala	His	Ser	Leu 5	Ser	Val	Gly	Gly	Ser 10	Gly	Tyr	Val	Cys	Pro 15	Leu
Leu	Ile	Arg	Glu 20	Val	Phe	Ile	Gln	Val 25	Leu	Ile	Lys	Leu	Arg 30	Val	Cys
Phe	Val	Gln 35	Cys	Phe	Ser	Glu	Ala 40	Asp	Arg	Asp	Ile	Met 45	Thr	Leu	Ala
Asn 50	His	Trp	Asn	Cys	Pro	Val 55	Leu	Ser	Ser	Asp	Ser 60	Asp	Phe	Cys	Ile
Phe 65	Asp	Leu	Lys	Thr	Gly 70	Phe	Cys	Pro	Leu	Asn 75	Ser	Phe	Gln	Trp	Arg 80
Asn	Met	Asn	Thr	Ile 85	Lys	Gly	Thr	Gln	Asn 90	Tyr	Ile	Pro	Ala	Lys 95	Cys
Phe	Ser	Leu	Asp 100	Ala	Phe	Cys	His	His 105	Phe	Ser	Asn	Met	Asn 110	Lys	Ala
Leu	Leu	Pro 115	Leu	Phe	Ala	Val	Leu 120	Cys	Gly	Asn	Asp 125	His	Val	Asn	Leu
Pro	Ile 130	Met	Glu	Thr	Phe	Leu 135	Ser	Lys	Ala	Arg	Leu 140	Pro	Leu	Gly	Ala
Thr 145	Ser	Ser	Lys	Gly	Arg 150	Arg	His	His	Arg	Ile 155	Leu	Gly	Leu	Leu	Asn 160
Trp	Leu	Ser	His 165	Phe	Ala	Asn	Pro	Thr	Glu 170	Ala	Leu	Asp	Asn 175	Val	Leu
Lys	Tyr	Leu	Pro 180	Lys	Lys	Asp	Arg	Glu 185	Asn	Val	Lys	Glu	Leu 190	Leu	Cys
Cys	Ser	Met 195	Glu	Glu	Tyr	Gln	Gln 200	Ser	Gln	Val	Lys	Leu 205	Gln	Asp	Phe

FIG. 120



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atgacacttg	ctaaccattg	gaattgccct	gtgttatcat	cagatagtga	cttttgcatt	60
tttgacctga	aaactgggtt	ttgcccattg	aatagctttc	agtggagaaa	tatgaacact	120
attaagggca	cacaaaacta	tatccctgcc	aaatgctttt	cccttgatgc	attctgccat	180
cacttcagca	atatgaataa	agctctacta	cctctctttg	cggtgctatg	tggaaatgac	240
catgttaatc	tacccatcat	ggagacattc	ttaagtaaag	cgctcttcc	tcttgagact	300
accagttcta	aaggaggag	acaccaccga	atcctgggac	ttctgaattg	gttgtctcat	360
tttgccaacc	ctaccgaagc	actagataat	gttctgaaat	acctcccaa	aaaggatcga	420
gaaaatgtta	aggaacttct	ctgctgttcc	atggaagaat	accaacagtc	ccagggtgaag	480
ctacaggact	tcttccagtg	tggctacttat	gtctgtccag	atgccttgaa	tcttggttta	540
ccagaatggg	tattagtggc	tttagctaaa	ggccagctat	ctcctttcat	cagtgatgct	600
ttggtcctaa	gacggaccat	tcttcccaca	cagggtgaaa	acatgcagca	accaaagcc	660
cacagaatat	ctcagcccat	caggcaaadc	atctatgggc	ttcttttaaa	tgcctcacca	720
catctggaca	agacatcctg	gaatgcattg	cctcctcagc	ctctagcttt	cagtgaagtg	780
gaaaggatta	ataaaaaatat	cagaacctca	atcattgatg	cagtagaact	ggccaaggat	840
cattctgact	taagcagatt	gactgagctc	tccttgagga	ggcggcagat	gcttctgtta	900
gaaaccctga	aggtgaaaca	gaccattctg	gagccaatcc	ctacttcact	gaagttgccc	960
attgctgtca	gttgctactg	gttgccagcac	accgagacca	aagcaaagct	acatcatcta	1020
caatccttac	tgctcacaat	gctagtgggg	cccttgattg	ccataatcaa	cagccctgga	1080
aatgtggacc	ctgtaccag	gcaggctcag	tgtcttgctc	ctcgttag		1128

Met	Thr	Leu	Ala	Asn	His	Trp	Asn	Cys	Pro	Val	Leu	Ser	Ser	Asp	Ser
1				5				10						15	
Asp	Phe	Cys	Ile	Phe	Asp	Leu	Lys	Thr	Gly	Phe	Cys	Pro	Leu	Asn	Ser
		20					25					30			
Phe	Gln	Trp	Arg	Asn	Met	Asn	Thr	Ile	Lys	Gly	Thr	Gln	Asn	Tyr	Ile
		35					40					45			
Pro	Ala	Lys	Cys	Phe	Ser	Leu	Asp	Ala	Phe	Cys	His	His	Phe	Ser	Asn
		50					55				60				
Met	Asn	Lys	Ala	Leu	Leu	Pro	Leu	Phe	Ala	Val	Leu	Cys	Gly	Asn	Asp
65					70				75					80	
His	Val	Asn	Leu	Pro	Ile	Met	Glu	Thr	Phe	Leu	Ser	Lys	Ala	Arg	Leu
			85					90						95	
Pro	Leu	Gly	Ala	Thr	Ser	Ser	Lys	Gly	Arg	Arg	His	His	Arg	Ile	Leu
		100						105					110		
Gly	Leu	Leu	Asn	Trp	Leu	Ser	His	Phe	Ala	Asn	Pro	Thr	Glu	Ala	Leu
		115					120					125			
Asp	Asn	Val	Leu	Lys	Tyr	Leu	Pro	Lys	Lys	Asp	Arg	Glu	Asn	Val	Lys
		130					135				140				
Glu	Leu	Leu	Cys	Cys	Ser	Met	Glu	Glu	Tyr	Gln	Gln	Ser	Gln	Val	Lys
145					150				155					160	
Leu	Gln	Asp	Phe	Phe	Gln	Cys	Gly	Thr	Tyr	Val	Cys	Pro	Asp	Ala	Leu
			165					170						175	
Asn	Leu	Gly	Leu	Pro	Glu	Trp	Val	Leu	Val	Ala	Leu	Ala	Lys	Gly	Gln
		180						185					190		
Leu	Ser	Pro	Phe	Ile	Ser	Asp	Ala	Leu	Val	Leu	Arg	Arg	Thr	Ile	Leu
		195					200					205			
Pro	Thr	Gln	Val	Glu	Asn	Met	Gln	Gln	Pro	Asn	Ala	His	Arg	Ile	Ser
		210					215					220			

FIG.12R

FIG. 12R

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Gln Pro Ile Arg Gln Ile Ile Tyr Gly Leu Leu Leu Asn Ala Ser Pro  
225 230 235 240  
His Leu Asp Lys Thr Ser Trp Asn Ala Leu Pro Pro Gln Pro Leu Ala  
245 250 255  
Phe Ser Glu Val Glu Arg Ile Asn Lys Asn Ile Arg Thr Ser Ile Ile  
260 265 270  
Asp Ala Val Glu Leu Ala Lys Asp His Ser Asp Leu Ser Arg Leu Thr  
275 280 285  
Glu Leu Ser Leu Arg Arg Arg Gln Met Leu Leu Leu Glu Thr Leu Lys  
290 295 300  
Val Lys Gln Thr Ile Leu Glu Pro Ile Pro Thr Ser Leu Lys Leu Pro  
305 310 315 320  
Ile Ala Val Ser Cys Tyr Trp Leu Gln His Thr Glu Thr Lys Ala Lys  
325 330 335  
Leu His His Leu Gln Ser Leu Leu Leu Thr Met Leu Val Gly Pro Leu  
340 345 350  
Ile Ala Ile Ile Asn Ser Pro Gly Asn Val Asp Pro Val Pro Arg Gln  
355 360 365  
Ala Gln Cys Leu Ala Pro Arg  
370 375

FIG.12R-1

092361-0001

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atgaacacta	ttaagggcac	acaaaactat	atccctgcc	aatgcttttc	ccttgatgca	60
ttctgccatc	acttcagcaa	tatgaataaa	gctctactac	ctctctttgc	ggtgctatgt	120
ggaaatgacc	atgttaatct	acccatcatg	gagacattct	taagtaaagc	gcgtcttcct	180
cttgagacta	ccagttctaa	agggaggaga	caccaccgaa	tcctgggact	tctgaattgg	240
ttgtctcatt	ttgccaaacc	taccgaagca	ctagataatg	ttctgaaata	cctcccaaaa	300
aaggatcgag	aaaatgttaa	ggaacttctc	tgctgttcca	tggaagaata	ccaacagtcc	360
caggtgaagc	tacaggactt	cttccagtg	ggtacttatg	tctgtccaga	tgccttgaat	420
cttggtttac	cagaatgggt	attagtggct	ttagctaaag	gccagctatc	tcctttcatc	480
agtgatgctt	tggtcctaag	acggaccatt	cttcccacac	aggtggaaaa	catgcagcaa	540
ccaaatgccc	acagaatatc	tcagccccatc	aggcaaataca	tctatgggct	tcttttaa	600
gcctcaccac	atctggacaa	gacatcctgg	aatgcattgc	ctcctcagcc	tctagctttc	660
agtgaagtgg	aaaggattaa	taaaaatatc	agaacctcaa	tcattgatgc	agtagaactg	720
gccaaggatc	attctgactt	aagcagattg	actgagctct	ccttgaggag	gcggcagatg	780
cttctgttag	aaaccctgaa	ggtgaaacag	accattctgg	agccaatccc	tacttcactg	840
aagttgccc	ttgctgtcag	ttgctactgg	ttgcagcaca	ccgagaccaa	agcaaagcta	900
catcatctac	aatccttact	gctcacaatg	ctagtggggc	ccttgattgc	cataatcaac	960
agccctggaa	atgtggaccc	tgtacccagg	caggctcagt	gtcttgctcc	tcgctag	1017

FIG. 12S

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Met	Asn	Thr	Ile	Lys	Gly	Thr	Gln	Asn	Tyr	Ile	Pro	Ala	Lys	Cys	Phe
1				5				10						15	
Ser	Leu	Asp	Ala	Phe	Cys	His	His	Phe	Ser	Asn	Met	Asn	Lys	Ala	Leu
			20					25					30		
Leu	Pro	Leu	Phe	Ala	Val	Leu	Cys	Gly	Asn	Asp	His	Val	Asn	Leu	Pro
		35					40					45			
Ile	Met	Glu	Thr	Phe	Leu	Ser	Lys	Ala	Arg	Leu	Pro	Leu	Gly	Ala	Thr
	50					55					60				
Ser	Ser	Lys	Gly	Arg	Arg	His	His	Arg	Ile	Leu	Gly	Leu	Leu	Asn	Trp
65				70						75					80
Leu	Ser	His	Phe	Ala	Asn	Pro	Thr	Glu	Ala	Leu	Asp	Asn	Val	Leu	Lys
				85					90					95	
Tyr	Leu	Pro	Lys	Lys	Asp	Arg	Glu	Asn	Val	Lys	Glu	Leu	Leu	Cys	Cys
			100					105					110		
Ser	Met	Glu	Glu	Tyr	Gln	Gln	Ser	Gln	Val	Lys	Leu	Gln	Asp	Phe	Phe
			115				120					125			
Gln	Cys	Gly	Thr	Tyr	Val	Cys	Pro	Asp	Ala	Leu	Asn	Leu	Gly	Leu	Pro
	130					135					140				
Glu	Trp	Val	Leu	Val	Ala	Leu	Ala	Lys	Gly	Gln	Leu	Ser	Pro	Phe	Ile
145					150					155					160
Ser	Asp	Ala	Leu	Val	Leu	Arg	Arg	Thr	Ile	Leu	Pro	Thr	Gln	Val	Glu
				165					170					175	
Asn	Met	Gln	Gln	Pro	Asn	Ala	His	Arg	Ile	Ser	Gln	Pro	Ile	Arg	Gln
			180					185					190		
Ile	Ile	Tyr	Gly	Leu	Leu	Leu	Asn	Ala	Ser	Pro	His	Leu	Asp	Lys	Thr
		195					200					205			
Ser	Trp	Asn	Ala	Leu	Pro	Pro	Gln	Pro	Leu	Ala	Phe	Ser	Glu	Val	Glu
	210					215					220				
Arg	Ile	Asn	Lys	Asn	Ile	Arg	Thr	Ser	Ile	Ile	Asp	Ala	Val	Glu	Leu
225					230				235						240
Ala	Lys	Asp	His	Ser	Asp	Leu	Ser	Arg	Leu	Thr	Glu	Leu	Ser	Leu	Arg
				245					250					255	
Arg	Arg	Gln	Met	Leu	Leu	Leu	Glu	Thr	Leu	Lys	Val	Lys	Gln	Thr	Ile
			260					265					270		
Leu	Glu	Pro	Ile	Pro	Thr	Ser	Leu	Lys	Leu	Pro	Ile	Ala	Val	Ser	Cys
		275					280					285			
Tyr	Trp	Leu	Gln	His	Thr	Glu	Thr	Lys	Ala	Lys	Leu	His	His	Leu	Gln
	290					295					300				
Ser	Leu	Leu	Leu	Thr	Met	Leu	Val	Gly	Pro	Leu	Ile	Ala	Ile	Ile	Asn
305					310					315					320
Ser	Pro	Gly	Asn	Val	Asp	Pro	Val	Pro	Arg	Gln	Ala	Gln	Cys	Leu	Ala
				325					330					335	
Pro	Arg														

FIG.12S-1

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atgcttttcc ctgga

15

Met Leu Phe Pro  
1

## FIG.12T

atgcattctg ccatcacttc agcaatatga

30

Met His Ser Ala Ile Thr Ser Ala Ile  
1 5

## FIG.12U

atgaataaag	ctctactacc	tctctttgcg	gtgctatgtg	gaaatgacca	tgттаатcta	60
cccatcatgg	agacattctt	aagtaaagcg	cgtcttcctc	ttggagctac	cagttctaaa	120
gggaggagac	accaccgaat	cctgggactt	ctgaattggg	tgtctcattt	tgccaaccct	180
accgaagcac	tagataatgt	tctgaaatac	ctcccaaaaa	aggatcgaga	aaatgttaag	240
gaacttctct	gctgttccat	ggaagaatac	caacagtccc	aggtgaagct	acaggacttc	300
ttccagtgtg	gtacttatgt	ctgtccagat	gccttgaatc	ttggtttacc	agaatgggta	360
ttagtggctt	tagctaaagg	ccagctatct	cctttcatca	gtgatgcttt	ggtcctaaga	420
cggaccattc	ttccacaca	ggtggaaaac	atgcagcaac	caaatgcccc	cagaatatct	480
cagcccatca	ggcaaатcat	ctatgggctt	cttttaaатg	cctcaccaca	tctggacaag	540
acatcctgga	atgcattgcc	tcctcagcct	ctagctttca	gtgaagtgga	aaggattaat	600
aaaaatatca	gaacctcaat	cattgatgca	gtagaactgg	ccaaggatca	ttctgactta	660
agcagattga	ctgagctctc	cttgaggagg	cggcagatgc	ttctgttaga	aaccctgaag	720
gtgaaacaga	ccattctgga	gccaatccct	acttcactga	agttgcccat	tgctgtcagt	780
tgctactggg	tgagcacac	cgagaccaa	gcaaagctac	atcatctaca	atccttactg	840
ctcacaatgc	tagtggggcc	cttgattgcc	ataatcaaca	gccctggaaa	tgtggaccct	900
gtacccaggc	aggctcagtg	tcttgctcct	cgctag			936

## FIG.12V

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Met	Asn	Lys	Ala	Leu	Leu	Pro	Leu	Phe	Ala	Val	Leu	Cys	Gly	Asn	Asp
1				5				10						15	
His	Val	Asn	Leu	Pro	Ile	Met	Glu	Thr	Phe	Leu	Ser	Lys	Ala	Arg	Leu
			20					25					30		
Pro	Leu	Gly	Ala	Thr	Ser	Ser	Lys	Gly	Arg	Arg	His	His	Arg	Ile	Leu
		35					40					45			
Gly	Leu	Leu	Asn	Trp	Leu	Ser	His	Phe	Ala	Asn	Pro	Thr	Glu	Ala	Leu
	50					55					60				
Asp	Asn	Val	Leu	Lys	Tyr	Leu	Pro	Lys	Lys	Asp	Arg	Glu	Asn	Val	Lys
65					70					75					80
Glu	Leu	Leu	Cys	Cys	Ser	Met	Glu	Glu	Tyr	Gln	Gln	Ser	Gln	Val	Lys
				85					90					95	
Leu	Gln	Asp	Phe	Phe	Gln	Cys	Gly	Thr	Tyr	Val	Cys	Pro	Asp	Ala	Leu
			100					105					110		
Asn	Leu	Gly	Leu	Pro	Glu	Trp	Val	Leu	Val	Ala	Leu	Ala	Lys	Gly	Gln
		115					120					125			
Leu	Ser	Pro	Phe	Ile	Ser	Asp	Ala	Leu	Val	Leu	Arg	Arg	Thr	Ile	Leu
	130					135					140				
Pro	Thr	Gln	Val	Glu	Asn	Met	Gln	Gln	Pro	Asn	Ala	His	Arg	Ile	Ser
145					150					155					160
Gln	Pro	Ile	Arg	Gln	Ile	Ile	Tyr	Gly	Leu	Leu	Leu	Asn	Ala	Ser	Pro
				165					170					175	
His	Leu	Asp	Lys	Thr	Ser	Trp	Asn	Ala	Leu	Pro	Pro	Gln	Pro	Leu	Ala
			180					185					190		
Phe	Ser	Glu	Val	Glu	Arg	Ile	Asn	Lys	Asn	Ile	Arg	Thr	Ser	Ile	Ile
		195					200					205			
Asp	Ala	Val	Glu	Leu	Ala	Lys	Asp	His	Ser	Asp	Leu	Ser	Arg	Leu	Thr
210					215					220					
Glu	Leu	Ser	Leu	Arg	Arg	Arg	Gln	Met	Leu	Leu	Leu	Glu	Thr	Leu	Lys
225					230					235					240
Val	Lys	Gln	Thr	Ile	Leu	Glu	Pro	Ile	Pro	Thr	Ser	Leu	Lys	Leu	Pro
				245					250					255	
Ile	Ala	Val	Ser	Cys	Tyr	Trp	Leu	Gln	His	Thr	Glu	Thr	Lys	Ala	Lys
			260					265					270		
Leu	His	His	Leu	Gln	Ser	Leu	Leu	Leu	Thr	Met	Leu	Val	Gly	Pro	Leu
		275					280					285			
Ile	Ala	Ile	Ile	Asn	Ser	Pro	Gly	Asn	Val	Asp	Pro	Val	Pro	Arg	Gln
	290					295					300				
Ala	Gln	Cys	Leu	Ala	Pro	Arg									
305						310									

FIG.12V-1

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atgtggaaat ga

12

Met Trp Lys

1

## FIG.12W

atgaccatgt taatctaccc atcatggaga cattcttaa

39

Met Thr Met Leu Ile Tyr Pro Ser Trp Arg His Ser

1

5

10

## FIG.12X

atgttaatct acccatcatg gagacattct taa

33

Met Leu Ile Tyr Pro Ser Trp Arg His Ser

1

5

10

## FIG.12Y

atggagacat	tcttaagtaa	agcgcgtctt	cctcttgagg	ctaccagttc	taaagggagg	60
agacaccacc	gaatcctggg	acttctgaat	tggttgtctc	attttgccaa	ccctaccgaa	120
gcactagata	atgttctgaa	atacctccca	aaaaaggatc	gagaaaatgt	taaggaactt	180
ctctgctggt	ccatggaaga	ataccaacag	tcccagggtga	agctacagga	cttcttccag	240
tgtggtactt	atgtctgtcc	agatgccttg	aatcttggtt	taccagaatg	ggtattagt	300
gcttttagcta	aaggccagct	atctcctttc	atcagtgatg	ctttggtcct	aagacggacc	360
attcttccca	cacaggtgga	aaacatgcag	caaccaaagt	cccacagaat	atctcagccc	420
atcaggcaaa	tcatctatgg	gcttctttta	aatgcctcac	cacatctgga	caagacatcc	480
tggaatgcat	tgcctcctca	gcctctagct	ttcagtgaag	tggaaaggat	taataaaaat	540
atcagaacct	caatcattga	tgcagtagaa	ctggccaagg	atcattctga	cttaagcaga	600
ttgactgagc	tctccttgag	gaggcggcag	atgcttctgt	tagaaaccct	gaaggtgaaa	660
cagaccattc	tggagccaat	ccctacttca	ctgaagttgc	ccattgctgt	cagttgctac	720
tggttgcagc	acaccgagac	caaagcaaag	ctacatcatc	tacaatcctt	actgctcaca	780
atgctagtgg	ggcccttgat	tgccataatc	aacagccctg	gaaatgtgga	ccctgtaccc	840
aggcaggctc	agtgtcttgc	tcctcgctag				870

## FIG.12Z

0992763.00301

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Met	Glu	Thr	Phe	Leu	Ser	Lys	Ala	Arg	Leu	Pro	Leu	Gly	Ala	Thr	Ser
1				5					10					15	
Ser	Lys	Gly	Arg	Arg	His	His	Arg	Ile	Leu	Gly	Leu	Leu	Asn	Trp	Leu
			20					25					30		
Ser	His	Phe	Ala	Asn	Pro	Thr	Glu	Ala	Leu	Asp	Asn	Val	Leu	Lys	Tyr
		35					40					45			
Leu	Pro	Lys	Lys	Asp	Arg	Glu	Asn	Val	Lys	Glu	Leu	Leu	Cys	Cys	Ser
	50					55				60					
Met	Glu	Glu	Tyr	Gln	Gln	Ser	Gln	Val	Lys	Leu	Gln	Asp	Phe	Phe	Gln
65				70					75						80
Cys	Gly	Thr	Tyr	Val	Cys	Pro	Asp	Ala	Leu	Asn	Leu	Gly	Leu	Pro	Glu
				85					90					95	
Trp	Val	Leu	Val	Ala	Leu	Ala	Lys	Gly	Gln	Leu	Ser	Pro	Phe	Ile	Ser
			100					105					110		
Asp	Ala	Leu	Val	Leu	Arg	Arg	Thr	Ile	Leu	Pro	Thr	Gln	Val	Glu	Asn
		115					120					125			
Met	Gln	Gln	Pro	Asn	Ala	His	Arg	Ile	Ser	Gln	Pro	Ile	Arg	Gln	Ile
	130					135					140				
Ile	Tyr	Gly	Leu	Leu	Leu	Asn	Ala	Ser	Pro	His	Leu	Asp	Lys	Thr	Ser
145					150					155					160
Trp	Asn	Ala	Leu	Pro	Pro	Gln	Pro	Leu	Ala	Phe	Ser	Glu	Val	Glu	Arg
				165					170					175	
Ile	Asn	Lys	Asn	Ile	Arg	Thr	Ser	Ile	Ile	Asp	Ala	Val	Glu	Leu	Ala
			180					185					190		
Lys	Asp	His	Ser	Asp	Leu	Ser	Arg	Leu	Thr	Glu	Leu	Ser	Leu	Arg	Arg
		195					200					205			
Arg	Gln	Met	Leu	Leu	Leu	Glu	Thr	Leu	Lys	Val	Lys	Gln	Thr	Ile	Leu
	210					215					220				
Glu	Pro	Ile	Pro	Thr	Ser	Leu	Lys	Leu	Pro	Ile	Ala	Val	Ser	Cys	Tyr
225					230					235					240
Trp	Leu	Gln	His	Thr	Glu	Thr	Lys	Ala	Lys	Leu	His	His	Leu	Gln	Ser
				245					250					255	
Leu	Leu	Leu	Thr	Met	Leu	Val	Gly	Pro	Leu	Ile	Ala	Ile	Ile	Asn	Ser
			260				265						270		
Pro	Gly	Asn	Val	Asp	Pro	Val	Pro	Arg	Gln	Ala	Gln	Cys	Leu	Ala	Pro
		275					280					285			

Arg

FIG.12Z-1

atgttaagga acttctctgc tgttccatgg aagaatacca acagtcccag gtga

54

Met	Leu	Arg	Asn	Phe	Ser	Ala	Val	Pro	Trp	Lys	Asn	Thr	Asn	Ser	Pro
1				5					10					15	

Arg

FIG.12AA

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atggaagaat	accaacagtc	ccaggtgaag	ctacaggact	tcttccagtg	tggtacttat	60
gtctgtccag	atgccttgaa	tcttggttta	ccagaatggg	tattagtggc	tttagctaaa	120
ggccagctat	ctcctttcat	cagtgatgct	ttggctcctaa	gacggacat	tcttcccaca	180
caggtggaaa	acatgcagca	accaaagcc	cacagaatat	ctcagcccat	caggcaaadc	240
atctatgggc	ttcttttaaa	tgctcacca	catctggaca	agacatcctg	gaatgcattg	300
cctcctcagc	ctctagcttt	cagtgaagtg	gaaaggatta	ataaaaatat	cagaacctca	360
atcattgatg	cagtagaact	ggccaaggat	cattctgact	taagcagatt	gactgagctc	420
tccttgagga	ggcggcagat	gcttctgtta	gaaaccctga	aggtgaaaca	gaccattctg	480
gagccaatcc	ctacttcact	gaagttgcc	attgctgtca	gttgctactg	gttgccagcac	540
accgagacca	aagcaaagct	acatcatcta	caatccttac	tgctcacaat	gctagtgggg	600
cccttgattg	ccataatcaa	cagccctgga	aatgtggacc	ctgtacccag	gcaggctcag	660
tgtcttgctc	ctcgttag					678

Met	Glu	Glu	Tyr	Gln	Gln	Ser	Gln	Val	Lys	Leu	Gln	Asp	Phe	Phe	Gln
1				5					10					15	
Cys	Gly	Thr	Tyr	Val	Cys	Pro	Asp	Ala	Leu	Asn	Leu	Gly	Leu	Pro	Glu
			20					25				30			
Trp	Val	Leu	Val	Ala	Leu	Ala	Lys	Gly	Gln	Leu	Ser	Pro	Phe	Ile	Ser
		35					40					45			
Asp	Ala	Leu	Val	Leu	Arg	Arg	Thr	Ile	Leu	Pro	Thr	Gln	Val	Glu	Asn
	50					55					60				
Met	Gln	Gln	Pro	Asn	Ala	His	Arg	Ile	Ser	Gln	Pro	Ile	Arg	Gln	Ile
65				70					75					80	
Ile	Tyr	Gly	Leu	Leu	Leu	Asn	Ala	Ser	Pro	His	Leu	Asp	Lys	Thr	Ser
			85					90					95		
Trp	Asn	Ala	Leu	Pro	Pro	Gln	Pro	Leu	Ala	Phe	Ser	Glu	Val	Glu	Arg
		100						105					110		
Ile	Asn	Lys	Asn	Ile	Arg	Thr	Ser	Ile	Ile	Asp	Ala	Val	Glu	Leu	Ala
	115					120					125				
Lys	Asp	His	Ser	Asp	Leu	Ser	Arg	Leu	Thr	Glu	Leu	Ser	Leu	Arg	Arg
	130					135				140					
Arg	Gln	Met	Leu	Leu	Leu	Glu	Thr	Leu	Lys	Val	Lys	Gln	Thr	Ile	Leu
145			150					155						160	
Glu	Pro	Ile	Pro	Thr	Ser	Leu	Lys	Leu	Pro	Ile	Ala	Val	Ser	Cys	Tyr
			165					170					175		
Trp	Leu	Gln	His	Thr	Glu	Thr	Lys	Ala	Lys	Leu	His	His	Leu	Gln	Ser
		180					185					190			
Leu	Leu	Leu	Thr	Met	Leu	Val	Gly	Pro	Leu	Ile	Ala	Ile	Ile	Asn	Ser
	195					200					205				
Pro	Gly	Asn	Val	Asp	Pro	Val	Pro	Arg	Gln	Ala	Gln	Cys	Leu	Ala	Pro
	210					215					220				
Arg															
225															

FIG.12AB



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atgcagcaac	caaatgccca	cagaatatct	cagcccatca	ggcaaatacat	ctatgggctt	60
cttttaaatg	cctcaccaca	tctggacaag	acatcctgga	atgcattgcc	tcctcagcct	120
ctagctttca	gtgaagtgga	aaggattaat	aaaaatatca	gaacctcaat	cattgatgca	180
gtagaactgg	ccaaggatca	ttctgactta	agcagattga	ctgagctctc	cttgaggagg	240
cggcagatgc	ttctgttaga	aaccctgaag	gtgaaacaga	ccattctgga	gccaatccct	300
acttcactga	agttgcccac	tgctgtcagt	tgctactggg	tgcagcacac	cgagaccaaa	360
gcaaagctac	atcatctaca	atccttactg	ctcacaatgc	tagtggggcc	cttgattgcc	420
ataatcaaca	gccctggaaa	tgtggaccct	gtacccaggc	aggctcagt	tcttgctcct	480
cgctag						486

Met	Gln	Gln	Pro	Asn	Ala	His	Arg	Ile	Ser	Gln	Pro	Ile	Arg	Gln	Ile
1				5				10				15			
Ile	Tyr	Gly	Leu	Leu	Leu	Asn	Ala	Ser	Pro	His	Leu	Asp	Lys	Thr	Ser
			20					25				30			
Trp	Asn	Ala	Leu	Pro	Pro	Gln	Pro	Leu	Ala	Phe	Ser	Glu	Val	Glu	Arg
			35				40					45			
Ile	Asn	Lys	Asn	Ile	Arg	Thr	Ser	Ile	Ile	Asp	Ala	Val	Glu	Leu	Ala
	50				55					60					
Lys	Asp	His	Ser	Asp	Leu	Ser	Arg	Leu	Thr	Glu	Leu	Ser	Leu	Arg	Arg
65					70					75				80	
Arg	Gln	Met	Leu	Leu	Leu	Glu	Thr	Leu	Lys	Val	Lys	Gln	Thr	Ile	Leu
			85					90						95	
Glu	Pro	Ile	Pro	Thr	Ser	Leu	Lys	Leu	Pro	Ile	Ala	Val	Ser	Cys	Tyr
			100					105					110		
Trp	Leu	Gln	His	Thr	Glu	Thr	Lys	Ala	Lys	Leu	His	His	Leu	Gln	Ser
			115					120					125		
Leu	Leu	Leu	Thr	Met	Leu	Val	Gly	Pro	Leu	Ile	Ala	Ile	Ile	Asn	Ser
	130				135					140					
Pro	Gly	Asn	Val	Asp	Pro	Val	Pro	Arg	Gln	Ala	Gln	Cys	Leu	Ala	Pro
145					150				155					160	
Arg															

FIG.12AF

atgccacag	aatatctcag	cccatcaggc	aatcatcta	tgggcttctt	ttaa	54
-----------	------------	------------	-----------	------------	------	----

Met	Pro	Thr	Glu	Tyr	Leu	Ser	Pro	Ser	Gly	Lys	Ser	Ser	Met	Gly	Phe
1				5					10				15		
Phe															

FIG.12AG

atgggcttct	ttaa	15
------------	------	----

Met	Gly	Phe	Phe
1			

FIG.12AH

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atgcctcacc acatctggac aagacatcct ggaatgcatt gcctcctcag cctctag 57

Met Pro His His Ile Trp Thr Arg His Pro Gly Met His Cys Leu Leu  
 1 5 10 15  
 Ser Leu

## FIG.12AI

atgcattgcc tcctcagcct ctag 24

Met His Cys Leu Leu Ser Leu  
 1 5

## FIG.12AJ

atgcttctgt tagaaaccct gaaggtgaaa cagaccattc tggagccaat ccctacttca 60  
 ctgaagttgc ccattgctgt cagttgctac tggttgcagc acaccgagac caaagcaaag 120  
 ctacatcatc tacaatcctt actgctcaca atgctagtgg ggcccttgat tgccataatc 180  
 aacagccctg gaaatgtgga ccctgtaccc aggaggctc agtgtcttgc tcctcgctag 240

Met Leu Leu Leu Glu Thr Leu Lys Val Lys Gln Thr Ile Leu Glu Pro  
 1 5 10 15  
 Ile Pro Thr Ser Leu Lys Leu Pro Ile Ala Val Ser Cys Tyr Trp Leu  
 20 25 30  
 Gln His Thr Glu Thr Lys Ala Lys Leu His His Leu Gln Ser Leu Leu  
 35 40 45  
 Leu Thr Met Leu Val Gly Pro Leu Ile Ala Ile Ile Asn Ser Pro Gly  
 50 55 60  
 Asn Val Asp Pro Val Pro Arg Gln Ala Gln Cys Leu Ala Pro Arg  
 65 70 75

## FIG.12AK

atgctagtgg ggcccttgat tgccataatc aacagccctg gaaatgtgga ccctgtaccc 60  
 aggaggctc agtgtcttgc tcctcgctag 90

Met Leu Val Gly Pro Leu Ile Ala Ile Ile Asn Ser Pro Gly Asn Val  
 1 5 10 15  
 Asp Pro Val Pro Arg Gln Ala Gln Cys Leu Ala Pro Arg  
 20 25

## FIG.12AL

atgtggaccc tgtacccagg caggctcagt gtcttgctcc tcgctagttg gtaa 54

Met Trp Thr Leu Tyr Pro Gly Arg Leu Ser Val Leu Leu Leu Ala Ser  
 1 5 10 15  
 Trp

## FIG.12AM

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atggtgctaa gatgttgat gcagagttcc aaagagtga  
39

Met Val Leu Arg Cys Cys Met Gln Ser Ser Lys Glu  
1 5 10

## FIG.12AN

atgttgatg cagagttcca aagagtgaag gcgcagacac ggctggggcac aagactggac 60  
 ttagacacag ctacatctt ctgtcagtg cagtcctgtc tccagatggg gatgtatctc 120  
 aaccagctgc tgtccactcc tctcccagag ccagacctaa ctgactgta cagtgggaagc 180  
 ctggtgcacg gactatgcc gcaactgcta gcatcgacct ctgtagaaag tctcctgagc 240  
 atatgtcctg aggctaagca actttatgaa tatctattca atgccacaa ggtcatatgc 300  
 ccccgctga 309

Met Leu Tyr Ala Glu Phe Gln Arg Val Lys Ala Gln Thr Arg Leu Gly  
 1 5 10 15  
 Thr Arg Leu Asp Leu Asp Thr Ala His Ile Phe Cys Gln Trp Gln Ser  
 20 25 30  
 Cys Leu Gln Met Gly Met Tyr Leu Asn Gln Leu Leu Ser Thr Pro Leu  
 35 40 45  
 Pro Glu Pro Asp Leu Thr Arg Leu Tyr Ser Gly Ser Leu Val His Gly  
 50 55 60  
 Leu Cys Gln Gln Leu Leu Ala Ser Thr Ser Val Glu Ser Leu Leu Ser  
 65 70 75 80  
 Ile Cys Pro Glu Ala Lys Gln Leu Tyr Glu Tyr Leu Phe Asn Ala His  
 85 90 95  
 Lys Val Ile Cys Pro Arg  
 100

## FIG.12AO

atgcagagtt ccaaagagtg a

21

Met Gln Ser Ser Lys Glu  
1 5

## FIG.12AP



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atggggatgt atctcaacca gctgctgtcc actcctctcc cagagccaga cctaactcga 60  
 ctgtacagtg gaagcctggt gcacggacta tgccagcaac tgctagcatc gacctctgta 120  
 gaaagtctcc tgagcatatg tcctgaggct aagcaacttt atgaatatct attcaatgcc 180  
 cacaaggtca tatgccccg ctga 204

Met Gly Met Tyr Leu Asn Gln Leu Leu Ser Thr Pro Leu Pro Glu Pro  
 1 5 10 15  
 Asp Leu Thr Arg Leu Tyr Ser Gly Ser Leu Val His Gly Leu Cys Gln  
 20 25 30  
 Gln Leu Leu Ala Ser Thr Ser Val Glu Ser Leu Leu Ser Ile Cys Pro  
 35 40 45  
 Glu Ala Lys Gln Leu Tyr Glu Tyr Leu Phe Asn Ala His Lys Val Ile  
 50 55 60  
 Cys Pro Arg  
 65

## FIG.12AQ

atgtatctca accagctgct gtccactcct ctcccagagc cagacctaac tcgactgtac 60  
 agtggagcc tgggtgcacgg actatgccag caactgctag catcgacctc tgtagaaagt 120  
 ctctgagca tatgtcctga ggctaagcaa ctttatgaat atctattcaa tgcccacaag 180  
 gtcatatgcc cccgctga 198

Met Tyr Leu Asn Gln Leu Leu Ser Thr Pro Leu Pro Glu Pro Asp Leu  
 1 5 10 15  
 Thr Arg Leu Tyr Ser Gly Ser Leu Val His Gly Leu Cys Gln Gln Leu  
 20 25 30  
 Leu Ala Ser Thr Ser Val Glu Ser Leu Leu Ser Ile Cys Pro Glu Ala  
 35 40 45  
 Lys Gln Leu Tyr Glu Tyr Leu Phe Asn Ala His Lys Val Ile Cys Pro  
 50 55 60  
 Arg  
 65

## FIG.12AR

atgccagcaa ctgctagcat cgacctctgt agaaagtctc ctgagcatat gtcctga 57

Met Pro Ala Thr Ala Ser Ile Asp Leu Cys Arg Lys Ser Pro Glu His  
 1 5 10 15  
 Met Ser

## FIG.12AS

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atgagggaaa caaccggtt gggttgtaa

30

Met Arg Glu Thr Thr Gly Leu Gly Cys  
1 5

FIG.12AW

atggttgaaa acttagagga acatagtgag gcctccaaca ttgaataa

48

Met Val Glu Asn Leu Glu Glu His Ser Glu Ala Ser Asn Ile Glu  
1 5 10 15

FIG.12AX

atgtatttaa tataa

15

Met Tyr Leu Ile  
1

FIG.12AY

FIG.12AW

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atgcgccccg gccctgcccc ttggccctgc cctgtcccc	gggctgcgtc gggacctgcc	60
agacccccct cccgggtcct gagcccgaaac tcccagagct	caccgcgagg tgaccggggg	120
ccagcccagg agggcggggtg gtttgtgcga gttcccttgc	cacgcggggc cccggcccca	180
tcaagtcct ctggggacgt ccccgtcgga aaccggaaaa	agcagttcca gttaattgtg	240
tga		243

Met	Arg	Pro	Gly	Pro	Ala	Pro	Trp	Pro	Cys	Pro	Cys	Pro	Arg	Ala	Ala
1				5					10					15	
Ser	Gly	Pro	Ala	Arg	Pro	Pro	Ser	Arg	Val	Leu	Ser	Pro	Asn	Ser	Gln
			20					25					30		
Ser	Ser	Pro	Ala	Gly	Asp	Arg	Gly	Pro	Ala	Gln	Glu	Gly	Gly	Trp	Phe
		35					40					45			
Val	Arg	Val	Pro	Leu	Pro	Arg	Gly	Ala	Pro	Ala	Pro	Ser	Ser	Pro	Ser
	50					55				60					
Gly	Asp	Val	Pro	Val	Gly	Asn	Arg	Lys	Lys	Gln	Phe	Gln	Leu	Ile	Val
65					70					75					80

FIG. 13